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THE TRANSACTIONS

OF THE

EDINBURGH OBSTETRICAL SOCIETY.

VOL. XXIV.

SESSION 1898-99.

EDINBURGH: OLIVER AND BOYD
PUBLISHERS TO THE SOCIETY
1899.

BOSTON MEDICAL
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PREFACE.

THIS, the twenty-fourth volume of the Society's Transactions, contains a record of its proceedings during the Session 1898–99.

In it, as in former volumes, the views brought forward in the Papers are to be considered as those of the writers themselves, and not as those of the Society as a body.

THE EDITOR.

October 1899.

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John W. Ballantyne, M.D., F.R.C.P. Ed., . . . 1896

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1882 Barnes, Dr Robert, Lingwood, Liss, Hants.
1886 Bozeman, Dr Nathan, 296 Fifth Avenue, New York.
1891 Budin, Prof., Avenue Hoche 4, Paris.
1886 Chiara, Prof., Domenico, Florence.
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1898 Cullingworth, Charles J., M.D., D.C.L., 14 Manchester Square, London, W.
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1882 Emmet, Dr, 93 Madison Avenue, New York.
1882 Freund, Professor, Kaiser Wilhelm's University, Strassburg.
1891 Gusserow, Prof., Charité, Berlin.
1891 Halbertsma, Professor, Utrecht.
1882 Hegar, Professor, Albert Ludwig's University, Freiburg.
1898 Kelly, Prof. Howard A., M.D., John Hopkin's Hospital, Baltimore, U.S.A.
1892 Koeberlé, Dr Eugene, Strassburg.
1898 Leopold, Prof. G., M.D., Semina Strasse 25, Dresden.
1895 Martin, Professor Dr A., N. Elsasserstrasse 85, Berlin.
1892 Müller, Professor Peter, Berne, Switzerland.
1897 Mundé, Dr Paul F., 20 West Forty-fifth Street, New York.
1851 Oldham, Dr Henry, Marufa, Boscombe, Bournemouth.
1889 Olshausen, Professor, Frauenklinik, Artillerie Strasse 13, Berlin.
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1894 Priestley, Sir William O., M.D., M.P., LL.D., 17 Hertford Street, Mayfair, London, W.
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1895 Skene, Professor A. J. C., 167 Clinton St., Brooklyn, U.S.A.

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1877 Grassett, Dr F., Toronto.
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1848 Hartmann, Dr, St Petersburg.
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1860 Milburn, Dr George, London.
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1877 Moolman, Dr Henry, South Africa.
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1862 Murray, Dr David, London.
1859 Myrtle, Dr A. S., Harrogate.

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1885 Puckle, Dr S. Hale, Windermere.

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	James Watt Black, M.D., F.R.C.P. Lond., *London*,	1863
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	* James Jamieson, M.D., F.R.C.S. Ed.,	1866
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	*Robert William Felkin, M.D., *London*,	1884
	James K. King, M.D., *Watkins, New York*,	1884
	William Marshall, L.R.C.S. Ed., *Milnathort*,	1884
110	William Richardson, M.D., F.R.C.S. Ed., *Bristol*,	1884

		Date of Admission.
	Fourness Barrington, M.B., F.R.C.S. Eng., *Sydney, Australia,*	1884
	*Francis William Nicol Haultain, M.D., F.R.C.P. Ed.,	1884
	*John Struthers Stewart, L.R.C.P. & S. Ed.,	1884
	W. G. Anglin, M.D., C.M., *Kingston, Ontario,*	1885
115	Alexander Campbell, M.D., F.R.C.S. Ed., *Dundee,*	1885
	Charles Batten Gracie, L.R.C.P. Ed., M.R.C.S. Eng., *Burntisland,*	1885
	Frederick Anastasius Saunders, F.R.C.S. Ed., L.R.C.P. Ed., *Grahamstown, South Africa,*	1885
	John Smith, M.D., M.R.C.S. Eng., *Kirkcaldy,*	1885
	Allan Cuthbertson Sym, M.D., C.M.,	1885
120	Frederick J. Underhill, F.R.C.S. Ed., L.R.C.P. Ed., *British Columbia,*	1885
	William Gayton, M.D., M.R.C.P.L., M.R.C.S. Eng., *London,*	1885
	*Alexander Matthew, F.R.C.S. Ed., *Corstorphine,*	1885
	Alexander Somerville Cumming, M.D., F.R.C.P. Ed.,	1885
	Gustave Michael, M.B., C.M., *London,*	1885
125	*James Haig Ferguson, M.D., F.R.C.P. Ed., M.R.C.S. Eng.,	1885
	John Edward Gemmell, M.B., C.M., *Liverpool,*	1885
	Robert Stewart, M.B., C.M.,	1885
	Surgeon-Captain Robert Charles Macwatt, M.B., B.Sc., C.M., 7th Bengal Cavalry, *Bombay,*	1885
	*E. H. Lawrence Oliphant, M.D., C.M., *Glasgow,*	1885
130	Andrew Wallace Walker, L.R.C.P. Ed., L.F.P. & S. Glasg.,	1886
	James Hogarth Pringle, M.B., F.R.C.S. Eng., *Glasgow,*	1886
	Walter Blake Nisbet, M.B., C.M., *N. Queensland,*	1886
	Robert Swan Aitchison, M.D., F.R.C.P. Ed.,	1886
	John Walton Hamp, L.F.P. & S. Glasg., L.S.A., *Wolverhampton,*	1886
135	John Dickinson Leigh, M.B., C.M., *Scarboro',*	1886
	James Auriol Armitage, M.D., C.M., *Wolverhampton,*	1886
	William Henry Miller, M.D., F.R.C.P. Ed.,	1886
	John M'Call, L.R.C.P. Ed.,	1886
	Thomas Wood, M.B., C.M.,	1886
140	F. E. Drumheller, M.D., *Sunbury, Pennsylvania,*	1887
	Hugh M'Callum, L.R.C.P. & S. Ed., *Kinloch-Rannoch,*	1887
	Nutting Stuart Fraser, M.B., M.R.C.S. Eng., *St John's, Newfoundland,*	1887
	Augustus Alexander Matheson, M.D., F.R.C.P. Ed.,	1887
	Robert Mackenzie, M.D., C.M.,	1887
145	Simon Linton, M.B., C.M., *Grangemouth,*	1887
	Thomas Jackson Thyne, M.B., F.R.C.P. Ed.,	1887
	W. Burns Macdonald, M.B., C.M., *Dunbar,*	1887
	John St Clair Boyd, M.D., M.Ch., *Belfast,*	1887
	Briton Smallman Robson, M.B., C.M., *Newcastle-on-Tyne,*	1887
150	Ernest T. Roberton, M.D., M.R.C.S. Eng., *New Zealand,*	1887
	*Samuel Sloan, M.D., F.F.P. & S. Glasg., *Glasgow,*	1887
	James Wm. Fox, L.R.C.P. & S. Ed., *London,*	1887
	John Frederick Sturrock, M.B., C.M., *Broughty-Ferry,*	1887
	Alexander Primrose, M.B., M.R.C.S. Eng., *Toronto, Canada,*	1887
155	Arthur Perigal, M.D., M.R.C.S. Eng., *New Barnet, Herts,*	1887
	James Aitken Clark, M.B., C.M.,	1887
	Edward Carmichael, M.D., F.R.C.P. Ed.,	1887
	Percival Humble Watson, M.R.C.S. Eng., L.R.C.P. Ed. *Newcastle-on-Tyne,*	1887
	Charles Clark Teacher, M.B., C.M.,	1887
160	Robert Inch, M.B., C.M., *Gorebridge,*	1887
	Ellis Thomas Davies, M.D., M.R.C.S. Eng., *Liverpool,*	1887
	John Orr, M.B., C.M., *Pendleton,*	1887
	*George Owen Carr Mackness, M.D., C.M., *Broughty-Ferry,*	1887
	Francis Joseph Baildon, M.B., C.M., *Southport,*	1887
165	Surgeon-Lt. Ralph H. Maddox, M.B., M.R.C.S. Eng., I.M.S., *Bengal,*	1887

		Date of Admission.
	James Williamson Martin, M.D., F.R.C.P. Ed., *Dumfries*,	1887
	James Andrew Blair, M.B., C.M., D.Sc., *Straiton, Maybole*,	1887
	*John Thomson, M.D., F.R.C.P. Ed.,	1887
	Robert Kirk, M.D., F.R.C.S. Ed., *Bathgate*,	1887
170	*William Fraser Wright, M.B., C.M., *Leith*,	1887
	Alexander Bruce, M.D., F.R.C.P. Ed.,	1887
	Richard Joseph Trestan, L.R.C.P. & S. Ed., *Retford, Notts*,	1887
	Robert Henry Blaikie, M.D., F.R.C.S. Ed.,	1888
	James Hutcheson, M.D., F.R.C.S. Ed.,	1888
175	A. A. Jervis Pereira, M.D., *Delagoa Bay*,	1888
	Christopher Martin, M.B., F.R.C.S. Eng., *Birmingham*,	1888
	John George Havelock, M.D., C.M., *Montrose*,	1888
	John Pirie, M.B., C.M.,	1888
	James Gibson Graham, M.B., C.M., *Glasgow*,	1888
180	Robert Adams Brewis, M.D., C.M., *Dursley*,	1888
	John Allison, M.D., C.M., *Kettering, Northampton*,	1888
	Surgeon-Captain Charles H. Bedford, M.D., D.Sc., M.R.C.S. Eng., Bengal Army, *Bombay*,	1888
	Archibald Cowan Guthrie, M.B., C.M.,	1888
	John Cunninghame, M.B., C.M., *New Zealand*,	1888
185	Samuel Beatty, M.B., C.M., *Pitlochry*,	1888
	Professor James Chalmers Cameron, M.D., *Montreal*,	1888
	Albert Edward Morison, M.B., F.R.C.S. Ed., M.R.C.S. Eng., *Hartlepool*,	1888
	George H. Temple, M.B., C.M., *Weston-super-Mare*,	1888
	Norman L. Boxill, M.B., C.M., *Barbados*,	1888
190	Khumar B. Narayan, L.R.C.P. & S. Ed., *Cooch Behar, India*,	1888
	John Hunter Helm, M.B., C.M., *Ratho*,	1888
	George Scott MacGregor, M.D., C.M., *Glasgow*,	1888
	William Sneddon, M.B., C.M., *Cupar-Fife*,	1888
	Thomas Watts Eden, M.B., C.M., *London*,	1888
195	William Fordyce, M.D., C.M.,	1888
	Charles E. Harvey, M.B., M.R.C.S. Eng., *Sav-la-Mar, Jamaica*,	1889
	Frederick E. Welby, F.R.C.S. Ed., *St Helena*,	1889
	Alexander Lang Murray, L.R.C.P. & S. Ed.,	1889
	George Pirrie Boddie, M.B., C.M.,	1889
200	James F. W. Ross, M.D., *Toronto, Canada*,	1889
	J. Stuart Nairne, F.R.C.S. Ed., F.F.P. & S. Glasg., *Glasgow*,	1889
	John David Williams, M.D., C.M., *Cardiff*,	1889
	James S. Fox, M.B., M.R.C.S. Eng., *St Helens*,	1889
	S. M'Murtry, M.D., *Louisville, Kentucky, U.S.A.*,	1889
205	Hugh Jamieson, M.D., C.M.,	1889
	Thomas Wm. Nassau Greene, L.R.C.P. Ed., L.R.C.S.I., *Carlow*,	1889
	John Clarence Webster, M.D., F.R.C.P. Ed., *Montreal*,	1889
	William George Aitchison Robertson, M.D., F.R.C.P. Ed.,	1889
	William Basil Orr, M.D., C.M.,	1889
210	Edward Farr Armour, M.B., C.M.,	1889
	George Wilkinson, M.D., C.M., *Liverpool*,	1889
	James Lamond Lackie, M.D., F.R.C.P. Ed.,	1889
	James Wilson, M.B., C.M.,	1889
	Archibald Maclean, M.D., C.M., *Kilmarnock*,	1890
215	Frederick William Lyle, M.D., C.M., *London*,	1890
	Thomas Dobson Poole, M.D., C.M., *St Anne's-on-the-Sea*,	1890
	Walter Scott Gibson, M.B., C.M., *London*,	1890
	Charles Newberry Cobbett, M.D., C.M., *London*,	1890
	Alexander William Gordon Price, M.B., C.M.,	1890
220	Hugh Shapter Robinson, M.R.C.S. Eng., L.R.C.P. Ed., *London*,	1890
	George Matheson Cullen, M.D., C.M.,	1890
	Frederick Albert L. Lockhart, M.B., C.M., *Montreal, Canada*,	1890
	Edmund Frederick Tanney Price, M.B., C.M.,	1890

		Date of Admission.
	Ernest Theophilus Roberts, M.D., C.M., *Keighley*,	1890
225	Owen Foulkes Evans, M.D., C.M., *Liverpool*,	1890
	James Duncan Farquharson, M.B., C.M., *Newcastle-on-Tyne*,	1890
	William Smith, L.R.C.P. & S. Ed.,	1890
	Harvey Littlejohn, M.B., F.R.C.S. Ed.,	1890
	Carstairs Cumming Douglas, M.D., C.M., *Glasgow*,	1890
230	Robert Wise, M.D., C.M., *London*,	1890
	William Russell, M.D., F.R.C.P. Ed.,	1890
	Alexander Scott Duncan, M.B., C.M., *London*,	1890
	Prof. William Keiller, F.R.C.S. Ed., *Galveston, Texas, U.S.A.*,	1890
	Michael Dewar, M.D., C.M.,	1891
235	Gains T. Smith, M.D., *Moncton, New Brunswick*,	1891
	John Hugh Alexander Laing, M.B., C.M.,	1891
	Robert Thin, M.B., F.R.C.P. Ed.,	1891
	Alexander H. Vassie, M.B., C.M., *London*,	1891
	James Harvey, M.D., C.M.,	1891
240	Alexander Henderson, M.B., C.M.,	1891
	James Smith, M.B., C.M.,	1891
	George Balfour Marshall, M.D., C.M., *Glasgow*,	1891
	William Booth, F.R.C.S. Ed.,	1891
	Richard T. Yoe, M.D., *Louisville, Kentucky, U.S.A.*,	1891
245	Alexander Bruce Giles, M.D., C.M.,	1891
	Hamilton Graham Langwill, M.D., F.R.C.P. Ed., *Leith*,	1891
	Herbert Ernest Lee, M.B., C.M., *Australia*,	1891
	Charles Martin, M.B., C.M., *Newton Abbot*,	1892
	William Murray Cairns, M.B., C.M., *Liverpool*,	1892
250	Robert Dundas Helm, M.D., C.M., *Carlisle*,	1892
	William Wood, M.B., C.M.,	1892
	James Thomas Moore Giffen, F.R.C.S. Ed., *Chester*,	1892
	John Alexander Robertson, M.B., C.M., *Cape Colony*,	1892
	Frank Dendle, M.B., C.M., *Dunfermline*,	1892
255	Julius Henry Beilby, M.B., C.M.,	1892
	Frederick Thomas Anderson, M.D., F.R.C.S. Ed., *Barnstaple*,	1892
	J. Gordon Smith, L.R.C.P. & S. Ed., *West Africa*,	1892
	Simson Carstairs Fowler, M.B., C.M., *Juniper Green*,	1892
	Hugh Ernest Fraser, M.D., C.M., *Dundee*,	1892
260	Prof. John Alexander Campbell Kynoch, M.B., M.R.C.P. Ed., *Dundee*,	1892
	Alexander Brown Ritchie, M.B., C.M., *Hulme, Manchester*,	1892
	Walter John Shaw, M.B., C.M., *Cockburnspath*,	1892
	Robert Stirling, M.D., C.M., *Perth*,	1892
	William Henry Vickery, F.R.C.S. Eng., L.R.C.P. Lond., *Newcastle-on-Tyne*,	1892
265	George Foggin, L.R.C.P. & S. Ed., *Newcastle-on-Tyne*,	1892
	William Ramsay Smith, M.B., C.M., *Australia*,	1892
	A. Watson Munro, M.D., *Sydney, Australia*,	1892
	Charles Frederick Ponder, M.B., C.M., *Glasgow*,	1892
	John Tod, M.B., C.M., *Leith*,	1892
270	Richard J. Erskine Young, M.D., C.M.,	1892
	George Thomas C. Adams, L.R.C.P. & S. Ed., *Melbourne, Aust.*,	1892
	George Henry Walter Smith, M.D., C.M., *Sydney, Australia*,	1892
	John Lawson Dick, M.B., C.M., *Cape Colony*,	1892
	Charles Croomhall Easterbrook, M.B., C.M.,	1892
275	Walter Petrie Simpson, M.B., C.M., *Coningsby*,	1892
	James Ernest Moorhouse, M.D., C.M., *Stirling*,	1892
	D. W. Johnston, F.R.C.S. Ed., *Johannesburg, South Africa*,	1892
	David George Davidson, M.B., C.M.,	1892
	Allen Thomson Sloan, M.D., C.M.,	1893
280	Robert Balfour Graham, F.R.C.S. Ed., *Leven, Fife*,	1893
	Albert Frederick Rosa, M.B., C.M.,	1893
	George Benjamin Mitchell, M.B., C.M., *Whitby*,	1893
	Andrew Walker, M.D., C.M., *Sheffield*,	1893

		Date of Admission.
	H. Robins, M.D., *Jamaica*,	1893
285	L. J. Schofield, M.D., *Warrensburg, Mo., U.S.A.*,	1893
	David Milligan, M.B., C.M.,	1893
	George Morton Wilcockson, L.R.C.P. & S. Ed., *Reading*,	1893
	John MacRae, M.D., C.M., *Murrayfield*,	1893
	Ernest Switzer Forde, L.R.C.P. & S. Ed., *Dalry, Galloway*,	1893
290	George Wade, M.D., C.M., *Melrose*,	1893
	Philip Grierson Borrowman, M.B., C.M., *Elie, Fife*,	1893
	John Liddell, M.D., C.M., *Harrogate*,	1893
	William Herbert Gregory, M.D., C.M., *Beverley, Yorks*,	1893
	Ernest Coleman Moore, M.B., C.M.,	1893
295	Cuthbert Christy, M.B., C.M., *Broomfield*,	1893
	James Gibson Cattanach, M.B., C.M.,	1893
	George Elder, M.D., F.R.C.P. Ed.,	1893
	Alexander Maitland Easterbrook, M.B., C.M., *Gorebridge*,	1893
	W. H. M'Kenley, M.D., *New York*,	1893
300	Robert William Roberts, L.R.C.P. & S. Ed., *South Wales*,	1894
	Claude Buchanan Ker, M.D., C.M.,	1894
	John Malcolm Farquharson, M.B., C.M.,	1894
	Charles Alexander Butchart, M.B., C.M.,	1894
	Frederick Maurice Graham, L.R.C.P. & S. Ed., *Market-Drayton*,	1894
305	Robert Hoggan, M.B., C.M., *Liberton*,	1894
	James Livingstone Thompson, M.B., C.M., *Australia*,	1894
	George Stevenson Shirt Hirst, M.B., C.M., *Wolverhampton*,	1894
	John Stevens, M.D., F.R.C.P. Ed.,	1894
	Charles Isodon Bodon, M.D., *Budapest*,	1894
310	Hugh Lewis Hughes, L.R.C.P. & S. Ed., *Dowlais*,	1894
	Sylvanus Glanville Morris, M.D., C.M., *Nantgaredig*,	1894
	Georges P. Coromilas, M.D., *Athens, Greece*,	1894
	Thomas Easton, M.D., C.M.,	1894
	David Robertson Dobie, M.D., C.M., *Coldstream*,	1894
315	Gopal Govind Vatve, M.D., *Bombay*,	1894
	Robert William Beesley, M.D., C.M., *Bolton*,	1894
	William A. Stephen, M.B., C.M., *Loftus-in-Cleveland*,	1894
	William Edward Fothergill, M.D., C.M., *Manchester*,	1894
	George Sandison Brock, M.D., C.M., *Rome*,	1894
320	John M. Munro Kerr, M.B., C.M., *Glasgow*,	1894
	John Montgomery, M.B., C.M., *Birmingham*,	1895
	Robert Cochrane Buist, M.D., C.M., *Dundee*,	1895
	Robert Thomson Ferguson, M.B., C.M., *Anstruther*,	1895
	William Henry Stephenson, L.R.C.P. & S. Ed., L.F.P. & S. Glasg., *Manchester*,	1895
325	Angus Vallance MacGregor, M.D., C.M., *Hartlepool*,	1895
	Charles William Donald, M.B., C.M.,	1895
	Oguntola Sapara, L.R.C.P. & S. Ed., *Lagos, W. Africa*,	1895
	John Struthers, M.B., C.M., *Transkei, South Africa*,	1895
	B. W. Broad, M.B., C.M., *Cardiff*,	1895
330	Edwin Hindmarsh, M.B., C.M., *Bengal*,	1895
	Patrick Mackin, L.R.C.P. & S. Ed., *New Zealand*,	1895
	G. Edgar Helme, M.B., C.M., *Manchester*,	1895
	Percy T. Hughes, M.B., C.M., *Darlington*,	1895
	John Hosack Fraser, M.B., F.R.C.P. Ed., *Bridge of Allan*,	1895
335	Stewart Grant Ogilvy, M.B., C.M.,	1895
	Thomas Howard Morgan, M.D., F.R.C.S. Ed., *Queensland, Aust.*,	1895
	William Macrae Taylor, M.B., C.M.,	1895
	David James Graham, M.D., C.M.,	1895
	Walter William Chipman, M.B., C.M.,	1895
340	Oswald Hanson Isard, M.B., C.M., *Croydon*,	1896
	John Cumming, F.R.C.S. Ed., L.R.C.P. & S. Ed.,	1896
	Sol Jervois Aarons, M.D., C.M., *London*,	1896
	Robert Beveridge, M.B., C.M., *Leith*,	1896
	John Anderson, M.B., C.M., *Pitlochry*,	1896

		Date of Admission.
345	Thomas John Burton, M.D., C.M., *Bearsden*,	1896
	Robert M. Leith, M.B., C.M., *Port Elizabeth, Cape Colony*,	1896
	Robert Gordon M'Kerron, M.B., C.M., *Aberdeen*,	1896
	Donald George Gordon Macdonald, M.D., C.M., *Aberdeen*,	1896
	Frederick John M'Cann, M.D., M.R.C.P.L., *London*,	1896
350	David Robert Taylor, L.R.C.P. & S.Ed., *Ayton*,	1896
	James Curtis Whyte, M.D., C.M., *Dalkeith*,	1896
	Hugh Eyres, M.B., C.M., *Catterick*,	1896
	George William Simla Paterson, M.B., C.M.,	1896
	William Robert Martine, M.B., C.M., *Haddington*,	1896
355	Robert Henry Watson, M.D., C.M., *Hamilton*,	1896
	Thomas Marshall Callender, M.D., C.M., *Sidcup*,	1896
	Lewis Grant, M.B., C.M., *Neston*,	1896
	Robert Robertson, M.B., C.M.,	1897
	James Wilkie, L.R.C.P., & S. Ed., *Portobello*,	1897
360	Andrew Graham, M.D., *Currie*,	1897
	Douglas Chalmers Watson, M.B., C.M.,	1897
	Robert Mair, M.D., C.M., *Hawick*,	1897
	Roderick Murdoch Matheson, M.D., C.M., *Isle of Man*,	1897
	Robert Jardine, M.D., F.F.P.S.Glasg., M.R.C.S.Eng., *Glasgow*,	1897
365	Daniel Charles Edington, M.B., C.M., *Penrith*,	1897
	Edwin Arthur Gibson, M.B., C.M., *Glasgow*,	1897
	John Macmillan, M.D., F.R.C.P. Ed.,	1897
	Harold Sherman Ballantyne, M.B., C.M., *Dalkeith*,	1897
	Ernest Edward Porrit, M.B., F.R.C.S.E., *New Zealand*,	1897
370	William John Garbutt, M.B., C.M., *Darlington*,	1897
	Henry John Forbes Simson, M.B., C.M.,	1897
	William Herbert Goldie, M.D., C.M., *Auckland, New Zealand*,	1897
	Charles Minor Cooper, M.B., Ch.B.,	1897
	William Alexander Potts, M.D., C.M., *Birmingham*,	1897
375	Angus Macdonald, M.B., C.M.,	1897
	Bernard Samuel Story, M.D., F.R.C.S.E., *Annfield Plain*,	1898
	Alexander Macdonald, M.B., C.M.,	1898
	George Robert Livingston, B.B., C.M., *Dumfries*,	1898
	Charles Carmichael Forrester, M.B., C.M.,	1898
380	William Morrison Milne, M.B., C.M.,	1898
	Percival George Bannister, M.D., C.M.,	1898
	William Joseph Murphy Barry, M.D., M.R.C.P. Ed., *Dublin*,	1898
	Harold Malcolmson, M.B., C.M., *Holywood, Co. Down*,	1898
	John Christie Forbes, L.R.C.P. & S. Ed., *Liberton*,	1898
385	Alexander Cruikshank Ainslie, M.B., C.M.,	1898
	Henry Aylmer Dumat, M.D., C.M., *Durban, South Africa*,	1898
	Gabriel Maurange, M.D., *Paris*,	1898
	John Thomas Woodside, L.R.C.P. & S. Ed., *Holywood*,	1898
	George Freeland Barbour Simpson, M.B., Ch.B.,	1898
390	Alfred Charles Sandstein, M.B., Ch.B.,	1898
	Alfred Shearer, M.B., Ch.B.,	1898
	John Henry Rhodes, M.B., Ch.B., *Kendal*,	1898
	James Duncan Slight, M.B., Ch.B., *Portobello*,	1898
	Francis John Harvey Bateman, M.B., C.M., *Norwich*,	1898
395	Robert John Johnston, M.B., C.M.,	1899
	George Lyall Chiene, M.B., C.M.,	1899
	Percy Theodore Herring, M.D., C.M.,	1899
	William Bertie Mackay, M.D., *Berwick-on-Tweed*,	1899
	James Kennedy Drysdale, M.B., C.M.,	1899
400	Carel Hendrick Krüger, M.D., F.R.C.S. Ed., *Cape Colony*,	1899
	Captain Patrick Wilkins O'Gorman, M.D., D.P.H.,	1899
	Edward William Scott Carmichael, M.D., F.R.C.S. Ed.,	1899
403	James Wilson M'Brearty, F.R.C.S. Ed., L.R.C.P. Ed., *New Zealand*,	1899

ORDINARY FELLOWS.

ARRANGED ALPHABETICALLY.

(a.) LIFE MEMBERS.

		Date of Admission.
	Anderson, Dr John, Pitlochry,	1896
	Barbour, Dr A. H. Freeland, 4 Charlotte Square,	1879
	Craig, Dr William, 71 Bruntsfield Place,	1870
	Croom, Dr J. Halliday, 25 Charlotte Square,	1870
5	Cumming, Dr John, 20 Gilmore Place,	1896
	Dumat, Dr Henry Aylmer, 7 Devonshire Place, Durban, Natal, South Africa,	1898
	Hart, Dr D. Berry, 29 Charlotte Square,	1877
	Johnston, Dr D. W., P.O. Box 2022, Johannesburg, South African Republic,	1892
	Martin, Dr Christopher, Cleveland House, George Road, Edgbaston, Birmingham,	1888
10	Morgan, Dr T. H., Gympie, Queensland, Australia,	1895
	Ponder, Dr Charles F., 5 Ailsie Drive, Langside, Glasgow,	1892
	Ranking, Dr J. E., Tunbridge Wells,	1881
	Ross, Dr James F. W., 481 Sherbourne Street, Toronto, Canada,	1889
	Simpson, Professor A. R., 52 Queen Street,	1858
15	Simpson, Dr G. F. Barbour, 52 Queen Street,	1898
	Struthers, Dr John, Nqamakwe, Transkei, South Africa,	1895
	Vatve, Dr Gopal Govind, care of H.H. The Rajah of Miraj, Bombay, India,	1894

(b.) ANNUAL SUBSCRIBERS.

	Aarons, Dr S. J., 15 Devonshire Place, Cavendish Square, London, W.,	1896
	Adam, Dr George Rothwell, Carlton House, Hotham Street, East Melbourne, Australia,	1879
20	Adams, Dr George T. Cooke, 58 Collins Street, Melbourne, Victoria, Australia,	1892
	Affleck, Dr J. O., 38 Heriot Row,	1869
	Ainslie, Dr A. C., 20 Newington Road,	1898
	Aitchison, Dr R. S., 74 Great King Street,	1886
	Alexander, Dr W. B., 8 Blenheim Place,	1882
25	Allison, Dr J., Fuller House, Kettering, Northampton,	1888
	Anderson, Dr Fred. T., Boutport Street, Barnstaple, Devonshire,	1892
	Andrew, Dr James, 2 Atholl Crescent,	1868
	Anglin, Dr W. G., 52 Earl Street, Kingston, Ontario,	1885
	Archibald, Dr J., 2 The Avenue, Beckenham, Kent,	1877
30	Armitage, Dr J. A., 28 Waterloo Road South, Wolverhampton,	1886
	Armour, Dr E. F., 149 Bruntsfield Place,	1889
	Badger, Dr W., Penicuik,	1880
	Baildon, Dr F. J., 42 Hoghton Street, Southport,	1887
	Balfour, Dr Andrew, 12 Abercorn Terrace, Portobello,	1877
35	Ballantyne, Dr A., Dalkeith,	1870
	Ballantyne, Dr H. S., Dalkeith,	1897
	Ballantyne, Dr J. W., 24 Melville Street,	1883
	Bannister, Dr P. G.,	1898
	Barrington, Dr Fourness, 213 Macquarrie Street, Sydney, Australia,	1884
40	Barry, Dr W. J. M., 72 Lower Baggott Street, Dublin,	1898
	Bateman, Dr F. J. Harvey, St Giles, Norwich,	1898

		Date of Admission.
	Beatty, Dr Samuel, Craigvar, Pitlochry,	1888
	Bedford, Surgeon-Captain Charles H., M.D., D.Sc., M.R.C.S. Eng., H.M. Indian Medical Service, care of W. Watson & Co., 28 Apollo Street, Bombay,	1888
	Beesley, Dr R. W., Infirmary and Dispensary, Bolton,	1894
45	Beilby, Dr Julius H., 10 Clarendon Crescent,	1892
	Bell, Dr James L., Driffield, Yorkshire,	1884
	Bell, Dr Robert, 29 Lynedoch Street, Glasgow, W.,	1878
	Bentley, Dr G. H., Kirkliston,	1877
	Beveridge, Dr Robert, 9 James Place, Leith,	1896
50	Black, Dr Alexander, 13 Howe Street,	1881
	Black, Dr J. Watt, 15 Clarges Street, Piccadilly, London, W.,	1863
	Blaikie, Dr R. H., 42 Minto Street,	1888
	Blair, Dr J. A., Straiton Manse, Maybole,	1887
	Bleloch, Dr A., 2 Lonsdale Terrace,	1876
55	Boddie, Dr G. P., 73 Bruntsfield Place,	1889
	Bodon, Dr C. I., Király-utca 76, Budapest, Hungary,	1894
	Booth, Dr William, 2 Minto Street,	1891
	Borrowman, Dr Philip G., Elie, Fife,	1893
	Boxill, Dr N. L., Buttalls, St George, Barbados,	1888
60	Boyd, Dr J. St Clair, 27 Victoria Place, Belfast,	1887
	Brewis, Dr N. T., 23 Rutland Street,	1883
	Brewis, Dr R. Adams, Reine Barnes, Dursley, Gloucestershire,	1888
	Broad, Dr B. W., The Sanitorium, Cardiff,	1895
	Brock. Dr G. Sandison, Via Veneto, B. Rome,	1894
65	Brodie, Dr W. Haig, Battle, Sussex,	1881
	Bruce, Dr Alexander, 13 Alva Street,	1887
	Buist, Dr J. W., 1 Clifton Terrace,	1877
	Buist, Dr R. C., 166 Nethergate, Dundee,	1895
	Burton, Dr Thomas J., Lonsdale, Bearsden, Glasgow,	1896
70	Butchart, Dr C. A., 26 Leith Walk, Leith,	1894
	Cairns, Dr W. Murray, 67 Catherine Street, Liverpool,	1892
	Calder, Dr H. L., 60 Leith Walk, Leith,	1882
	Callender, Dr T. M., Wylverley, Sidcup,	1896
	Cameron, Prof. James C., M.D., 941 Dorchester St., Montreal,	1888
75	Campbell, Dr Alexander, 1 Clarendon Terrace, Dundee,	1885
	Carmichael, Dr Edward, 21 Abercromby Place,	1887
	Carmichael, Dr E. W. Scott, 22 Northumberland Street,	1899
	Carmichael, Dr James, 22 Northumberland Street,	1871
	Cattanach, Dr J. G., 3 Alvanley Terrace,	1893
80	Chiene, Dr George L., 26 Charlotte Square,	1899
	Chipman, Dr W. W., University Union, Park Place,	1895
	Christy, Dr Cuthbert, Pryors, Broomfield, Essex,	1893
	Church, Dr H. M., 36 George Square,	1875
	Clark, Dr J. A., 4 Cambridge Street,	1887
85	Cobbett, Dr C. N., 29 Rosslyn Hill, Hampstead, London, N.W.,	1890
	Connel, Dr J., Peebles,	1869
	Cooper, Dr C. M., 9 Marchmont Street,	1897
	Coromilas, Dr Georges P., 67 Minerva Street, Athens, Greece,	1894
	Cox, Dr Joshua J., St Ronan's, Eccles, Manchester,	1876
90	Croudace, Dr J. H., Foregate House, Stafford,	1878
	Cullen, Dr G. M., 48 Lauriston Place,	1890
	Cumming, Dr A. S., 18 Ainslie Place,	1885
	Cunninghame, Dr John, Port Chalmers, New Zealand,	1888
	Currie, Dr A. S., 81 Queen's Road, Finsbury Park, London, N.,	1882
95	Darling, Dr T. Brown, 13 Merchiston Place,	1884
	Davidson, Dr D. G., 9 Granville Terrace,	1892
	Davies, Dr E. T., 97 Shaw Street, Liverpool,	1887
	Dendle, Dr Frank, 2 Chalmers Street, Dunfermline	1892
	Deverell, Dr H. C., 12 Windsor Street,	1882
100	Dewar, Dr M., 24 Lauriston Place,	1891

		Date of Admission.
	Dick, Dr J. L. Cradoch, Cape Colony, South Africa,	1892
	Dickson, Dr George, 9 India Street,	1867
	Dobie, Dr D. R., Coldstream,	1894
	Donald, Dr C. W., 11 Braid Road,	1895
105	Douglas, Dr Carstairs, 2 Royal Crescent, Glasgow, W.,	1890
	Drumheller, Dr F. E., 406 Market St., Sunbury, Pennsylvania,	1887
	Drysdale, Dr James K., 22 Coltbridge Terrace,	1899
	Duncan, Dr A. J., 158 Nethergate, Dundee,	1879
	Duncan, Dr A. S., Eversley, Penge, London, S.E.,	1890
110	Dunlop, Dr H. M., 20 Abercromby Place,	1884
	Dunsmure, Dr J., 53 Queen Street,	1876
	Easterbrook, Dr A. M., Gorebridge,	1893
	Easterbrook, Dr C. C., Morningside Asylum,	1892
	Easton, Dr Thomas, 5 Marchmont Street,	1894
115	Eden, Dr T. Watts, 49 Queen Anne Street, Cavendish Square, London, W.,	1888
	Edington, Dr D. C., 4 Portland Place, Penrith,	1897
	Elder, Dr George, 7 Leopold Place,	1893
	Elder, Dr W. Nicol, 6 Torphichen Street,	1879
	Evans, Dr O. F., 71 Mulgrave Street, Liverpool,	1890
120	Eyres, Dr Hugh, Catterick, Yorkshire,	1896
	Farquharson, Dr J. D., 242 Westgate Road, Newcastle-on-Tyne,	1890
	Farquharson, Dr J. M., 2 Coates Place,	1894
	Felkin, Dr R. W., 23 Henrietta Street, Cavendish Square, London, W.,	1884
	Ferguson, Dr J. Haig, 25 Rutland Street,	1885
125	Ferguson, Dr R. T., Anstruther, Fife,	1895
	Finlay, Dr W. A., St Helen's, Russell Place, Trinity,	1880
	Foggin, Dr George, 8 Saville Row, Newcastle-on-Tyne,	1892
	Forbes, Dr J. C., Northfield, Liberton,	1898
	Forde, Dr E. S., Dalry, Galloway,	1893
130	Fordyce, Dr William, 20 Charlotte Square,	1888
	Fothergill, Dr W. E., 200 Oxford Road, Manchester,	1894
	Forrister, Dr C. C., 12 Greenhill Place,	1898
	Foulis, Dr James, 34 Heriot Row,	1878
	Fowler, Dr Simson C., Juniper Green,	1892
135	Fox, Dr James S., 6 Baldwin Street, St Helen's,	1889
	Fox, Dr J. W., 68 Lupus Street, Pimlico, London, S.W.,	1887
	Fraser, Dr H. E., Royal Infirmary, Dundee,	1892
	Fraser, Dr J. Hossack, Bellfield, Bridge of Allan,	1895
	Fraser, Dr J. Joynor, Hessle, East Yorks,	1880
140	Fraser, Dr Nutting S., 205 Gower Street, St John's, Newfoundland,	1887
	Garbutt, Dr W. J., Westbrook, Darlington,	1897
	Gayton, Dr William, Bartram Lodge, Fleet Road, Hampstead, London, N.W.,	1885
	Gemmell, Dr J. E., 12 Rodney Street, Liverpool,	1885
	Gibson, Dr E. Arthur, 2 Queen's Crescent, Glasgow, W.,	1897
145	Gibson, Dr W. Scott, 34 Dulwich Road, Herne Hill, London, S.E.,	1890
	Giffen, Dr J. T. M., 129 Boughton, Chester,	1892
	Giles, Dr A. B., 1 Kew Terrace,	1891
	Gilmour, Dr T. F., Port Ellen, Islay,	1882
	Goldie, Dr W. H., Auckland, New Zealand,	1897
150	Gracie, Dr C. B., Buccleuch Villa, Burntisland,	1885
	Graham, Dr A., Curriebank, Currie,	1897
	Graham, Dr D. J., 8 Gilmore Place,	1895
	Graham, Dr F. M., Willowbridge, Market-Drayton,	1894
	Graham, Dr J. Gibson, 17 Ashton Ter., Dowanhill, Glasgow,	1888
155	Graham, Dr R. Balfour, Leven, Fife,	1893
	Grant, Dr Lewis, Rock House, Neston, Cheshire,	1896
	Greene, Dr T. W. N., Bella Vista, Kew Gardens, Carlow, Ireland,	1889

		Date of Admission.
	Gregory, Dr W. H., 2 Bar Houses, Beverley, Yorks,	1893
	Guthrie, Dr A. Cowan, 171 Constitution Street, Leith,	1888
160	Hamilton, Dr J. R., Hawick,	1879
	Hamp, Dr J. Walton, Penn Road, Wolverhampton,	1886
	Hardie, Dr Thomas, 10 John's Place, Leith,	1870
	Harvey, Dr Charles E., Kingswood, Sav-la-Mar, Jamaica, W.I.,	1889
	Harvey, Dr James, 7 Blenheim Place,	1891
165	Haultain, Dr F. W. N., 17 Rutland Street,	1884
	Havelock, Dr J. G., Sunnyside, Montrose,	1888
	Hay, Dr Henry, 7 Brandon Street,	1879
	Helm, Dr J. H., Ratho,	1888
	Helm, Dr R. Dundas, 3 Alfred Street N., Portland Sq., Carlisle,	1892
170	Helme, Dr G. Edgar, Gloucester House, Rusholme, Manchester,	1895
	Henderson, Dr Alexander, 21 Pitt Street,	1891
	Henderson, Dr John, 7 John's Place, Leith,	1857
	Herring, Dr Percy T.,	1899
	Hewetson, Dr J., Holmfield, Reigate,	1881
175	Hindmarsh, Dr Edwin, Mozufferpore, Tirhoot State Railway, Bengal, India,	1895
	Hirst, Dr George S. S., The Elms, Goldthorn Hill, Wolverhampton,	1894
	Hoggan, Dr R., Bessville, Liberton,	1894
	Hooper, Dr J. W. D., 70 Collins Street, Melbourne, Australia,	1884
	Hughes, Dr H. L., Gwernllwyn House, Dowlais, Glamorganshire,	1894
180	Hughes, Dr P. T.,	1895
	Hunter, Dr George, 33 Palmerston Place,	1881
	Husband, Dr William, 4 Royal Circus,	1857
	Hutcheson, Dr J., 44 Moray Place,	1888
	Inch, Dr Robert, Gorebridge,	1887
185	Isard, Dr O. H., 18 St Peter's Road, Croydon, Surrey,	1896
	Jamieson, Dr Hugh, 13 Rutland Street,	1889
	Jamieson, Dr James, 43 George Square,	1866
	Jardine, Dr Robert, 5 Clifton Place, Glasgow, W.,	1897
	Johnston, Dr R. J., 1 Buccleuch Place,	1899
190	Johnston, Dr William, Pitt Terrace, Stirling,	1871
	Keiller, Prof. Wm., 1523 Thirty-first Street, Galveston, Texas, U.S.A.,	1890
	Ker, Dr C. B., City Fever Hospital,	1894
	Kerr, Dr J. M. Munro, 28 Berkeley Terrace, Glasgow,	1894
	King, Dr J. K., The Glen Springs Sanitorium, Watkins, New York, U.S.A.,	1884
195	Kirk, Dr Robert, Bathgate,	1887
	Krüger, Dr C. H., "Rock View," Paarl, Cape Colony, S. Africa	1899
	Kynoch, Professor Campbell, 8 Airlie Place, Dundee,	1892
	Lackie, Dr James, 1 Randolph Crescent,	1889
	Laing, Dr J. H. A., 11 Melville Street,	1891
200	Langwell, Dr H. G., 5 Hermitage Place, Leith,	1891
	Lee, Dr Herbert E., Gunnedah, N.S.W., Australia,	1892
	Leigh, Dr J. Dickinson, 7 Avenue Road, Falsgrave, Scarboro',	1886
	Leith, Dr Robert M., Provincial Hospital, Port Elizabeth, Cape Colony, South Africa,	1896
	Liddell, Dr J., North View, Victoria Avenue, Harrogate,	1893
205	Linton, Dr John, 60 George Square,	1863
	Linton, Dr Simon, Grangemouth,	1887
	Littlejohn, Dr Harvey, 11 Stafford Street,	1890
	Livingston, Dr G. R., 5 George Street, Dumfries,	1898
	Lockhart, Dr F. A. L., 38 Bishop Street, Montreal, Canada,	1890
210	Lucas, Dr Robert, Dalkeith,	1871
	Lyle, Dr F. W., 39 The Avenue, Castle Hill, Ealing, London. W.,	1890
	M'Bearty, Dr James W., Greymouth, West Coast, New Zealand,	1899
	M'Call, Dr John, 4 Leopold Place,	1886

		Date of Admission.
	M'Callum, Dr H., Kinloch-Rannoch,	1887
215	M'Cann, Dr F. J., 5 Curzon Street, Mayfair, London, W.,	1896
	Macdonald, Dr Alexander, 11 Ardmillan Terrace,	1898
	Macdonald, Dr Angus, 9 Glengyle Terrace,	1897
	Macdonald, Dr D. G. Gordon, 26 King Street, Aberdeen,	1896
	Macdonald, Dr W. B., 2 Bayswell, Dunbar,	1887
220	Macdonald, Dr W. Fraser, 16 Buckingham Ter., Glasgow, W.,	1884
	MacGregor, Dr A. V., Durham House, Victoria Road, Hartlepool,	1895
	Macgregor, Dr G. S., 2 Burnbank Terrace, Glasgow,	1888
	Mackay, Dr George, 74 Bruntsfield Place,	1879
	Mackay, Dr W. B., 23 Castlegate, Berwick-on-Tweed,	1899
225	M'Kenley, Dr W. H., 137 West 26th Street, New York,	1893
	Mackenzie, Dr R., Napier Villa, 2 Morningside Road,	1887
	M'Kerron, Dr R. Gordon, 1 Albyn Place, Aberdeen,	1896
	Mackin, Dr Patrick, 102 Cuba St., Wellington, New Zealand,	1895
	Mackness, Dr G. O. C., Fort Street House, Broughty-Ferry,	1887
230	M'Lean, Dr Archibald, Crosshouse, Kilmarnock,	1890
	Macmillan, Dr John, 27 Warrender Park Road,	1897
	M'Murtry, Dr L. S., 231 West Chesnut Street, Louisville, Kentucky, U.S.A.,	1889
	M'Nab, Dr John, Bunessan, Oban,	1873
	MacRae, Dr John, Lynwood, Murrayfield,	1893
235	MacVie, Dr S., Chirnside,	1881
	M'Watt, Dr John, Duns,	1879
	Macwatt, Dr R. C., 7th Bengal Cavalry, care of Messrs King, King & Co., Bombay,	1885
	Maddox, Dr Ralph H., I.M.S., Chapora, Saran, Bengal,	1887
	Mair, Dr Robert, Oliver Crescent, Hawick,	1897
240	Malcolmson, Dr Harold, Marine Parade, Holywood, Co. Down.,	1898
	Marshall, Dr G. Balfour, 19 Sandyford Place, Glasgow,	1891
	Marshall, Dr William, Milnathort,	1884
	Martin, Dr Charles, Dagenham House, Newton Abbot, South Devon,	1892
	Martin, Dr J. W., Burnfoot, Cluden, Dumfries,	1887
245	Martine, Dr W. R., Weston, Haddington,	1896
	Matheson, Dr A. A., 41 George Square,	1887
	Matheson, Dr Roderick M., 16 Finch Road, Douglas, Isle of Man,	1897
	Matthew, Dr Alexander, Corstorphine,	1885
	Maurange, Dr Gabriel, 6 Rue de Tournon, Paris,	1898
250	Menzies, Dr David, 20 Rutland Square,	1877
	Messer, Dr Fordyce, Helensburgh,	1866
	Michael, Dr Gustave, 5 Cambridge Place, Chestergate, Regent's Park, London, N.W.,	1885
	Millard, Dr W. W., 3 George Place,	1884
	Miller, Dr W. H., 51 Northumberland Street,	1886
255	Milligan, Dr D., 11 Palmerston Place,	1893
	Milne, Dr W. M., 27 Newington Road,	1898
	Mitchell, Dr G. B., 40 Baxtergate, Whitby,	1893
	Montgomery, Dr John, The Highlands, Balsall Heath, Birmingham,	1895
	Moore, Dr E. Coleman, 2 Coates Place,	1893
260	Moorhouse, Dr J. Ernest, 1 Glebe Avenue, Stirling,	1892
	More, Dr James, Rothwell, Kettering, Northampton,	1880
	Morison, Dr Albert E., Brougham Terrace, Hartlepool,	1888
	Morris, Dr S. Glanville, Plâs Cwmtwrch, Nantgaredig, South Wales,	1894
	Mowat, Dr John, 6 Buccleuch Place,	1884
265	Munro, Dr A. Watson, 183 Liverpool Street, Sydney, Australia,	1892
	Murray, Dr A. Lang, 32 Duddingston Park, Portobello,	1889
	Murray, Dr D. R., 41 Albany Street, Leith,	1878
	Murray, Dr James, 1 Brandon Street,	1879

		Date of Admission.
	Murray, Dr R. Milne, 11 Chester Street,	1880
270	Nairne, Dr J. Stuart, 141 Hill Street, Garnethill, Glasgow,	1889
	Napier, Dr A. D. Leith, North Terrace, East, Adelaide, South Australia,	1878
	Narayan, Mr Kumar B., Cooch Behar, India,	1888
	Nisbet, Dr W. B., Townsville, N. Queensland, Australia,	1886
	Oakes, Dr Arthur, Narrabri, Cole-park Road, Twickenham,	1879
275	Ogilvy, Dr Stewart Grant, 12 Graham Street,	1895
	O'Gorman, Dr Patrick W., 17th Bengal Infantry, Benares, N.-W. Provinces, India,	1899
	Oliphant, Dr E. H. Lawrence, 23 Newton Place, Glasgow,	1885
	Orr, Dr John, 2 Park Road, Eccles Old Road, Pendleton, Manchester,	1887
	Orr, Dr W. Basil, 13 Braid Road,	1889
280	Pairman, Dr T. Wyld, H.M. Prison, Lyttelton, New Zealand,	1883
	Paterson, Dr G. Keppie, 19 Albany Street,	1882
	Paterson, Dr G. W. Simla, 2 Glengyle Terrace,	1896
	Peddie, Dr H. Anderson, 24 Palmerston Place,	1882
	Pereira, Dr A. A. Jervis, Surgeon to the Delagoa Bay Railway, Lourenço Marques, Delagoa Bay, South Africa,	1888
285	Perigal, Dr A., New Barnet, Herts,	1887
	Pirie, Dr John, 15 Ardmillan Terrace,	1888
	Playfair, Dr John, 5 Melville Crescent,	1873
	Poole, Dr T. D., Poulton-le-Fylde,	1890
	Porritt, Dr E. E., Greytown, Wairarnpa, New Zealand,	1897
290	Porteous, Dr J. Lindsay, 83 Warburton Avenue, Yonkers, New York,	1875
	Potts, Dr W. A., 160 Hagley Road, Edgbaston, Birmingham,	1897
	Price, Dr A. W. Gordon, 9 Grange Road,	1890
	Price, Dr E. F. T.. 1 Middleby Street,	1890
	Primrose, Dr Alex., 196 Simcoe Street, Toronto, Canada,	1887
295	Pringle, Dr J. Hogarth, 172 Bath Street, Glasgow,	1886
	Proudfoot, Dr Thomas, 30 Lauriston Place,	1884
	Rattray, Dr A. M. T., Portobello,	1869
	Reid, Dr W. L., 7 Royal Crescent, Glasgow, W.,	1880
	Reid, Dr W. Spence, Oakley, Kirkcudbright,	1880
300	Rendell, Dr Herbert R., P.O. Box 606, St John's, Newfoundland,	1882
	Rhodes, Dr J. H., Greenside, Kendal,	1898
	Richardson, Dr William, Cotham Grove, Bristol,	1888
	Ritchie, Dr A. Brown, 117 Boston Street, Hulme, Manchester,	1892
	Ritchie, Dr James, 22 Charlotte Square,	1880
305	Ritchie, Dr R. Peel, 1 Melville Crescent,	1861
	Roberton, Dr Ernest, Auckland, New Zealand,	1887
	Roberts, Dr Ernest T., 75 Skipton Road, Keighley,	1890
	Roberts, Dr R. W., Cattybrook Villa, Cwmavon, near Port Talbot, South Wales,	1894
	Robertson, Dr John A., Matjesfontein, Cape Colony, South Africa,	1892
310	Robertson, Dr Robert, 34 Raeburn Place,	1897
	Robertson, Dr W. B., St Anne's, Thurlow Park Road, West Dulwich, London, S.E.,	1870
	Robertson, Dr W. G. Aitchison, 26 Minto Street,	1889
	Robins, Dr H., Sav-la-Mar, Jamaica, W.I.,	1893
	Robinson, Dr H. Shapter, Talfourd House, 78 Peckham Road, Camberwell, London, S.E.,	1890
315	Robson, Dr B. S., 66 Brighton Grove, Newcastle-on-Tyne,	1887
	Ronaldson, Dr T. R., 8 Charlotte Square,	1877
	Rosa, Dr Albert F., 20 Dundonald Street,	1893
	Russell, Dr W., 3 Walker Street,	1890
	Sandstein, Dr Alfred C., Pathology Laboratory, Edinburgh University,	1898

		Date of Admission.
320	Sapara, Dr Oguntola, Broad Street, Lagos, W. C. Africa,	1895
	Saunders, Dr F. A., Grahamstown, Cape Colony, South Africa,	1885
	Schofield, Dr L. J., Warrensburg, Mo., U.S.A.,	1893
	Scott, Dr T. R., Musselburgh,	1880
	Shaw, Dr W. J., Cockburnspath,	1892
325	Shearer, Dr Alfred, care of Mrs Murray, 14 Viewforth Square,	1898
	Simpson, Dr W. Petrie, The Elms, Coningsby,	1892
	Simson, Dr Harry, 13 Grosvenor Street,	1897
	Slight, Dr J. D., Durham Road, Portobello,	1898
	Sloan, Dr Allen T., 22 Forth Street,	1893
330	Sloan, Dr S., 5 Somerset Pl., Sauchiehall St. West, Glasgow,	1887
	Smart, Dr David, 74 Hartington Road, Sefton Park, Liverpool,	1882
	Smith, Dr G. H. Walton, Pendower, Oxford St., Paddington, Sydney, Australia,	1892
	Smith, Dr Gains T., Moncton, New Brunswick, Canada,	1891
	Smith, Dr James, 1 Parsonsgreen Terrace,	1891
335	Smith, Dr John, Brycehall, Kirkcaldy,	1885
	Smith, Dr J. Gordon, Akuse, Accra, Gold Coast, West Africa,	1892
	Smith, Dr William, 14 Hartington Gardens,	1890
	Smith, Dr W. Ramsay, The General Hospital, Adelaide, South Australia,	1892
	Sneddon, Dr William, Cupar-Fife,	1888
340	Somerville, Dr Robert, Galashiels,	1881
	Spalding, Dr William, Gorebridge,	1867
	Spence, Dr R., Burntisland,	1878
	Spence, Dr William, Dollar,	1884
	Stephen, Dr W. A., Loftus-in-Cleveland, Yorkshire,	1894
345	Stephenson, Dr W. H., 137 Rochdale Road, Harpurhey, Manchester,	1895
	Stevens, Dr John, 2 Shandon Street,	1894
	Stewart, Dr J. S., 15 Merchiston Place,	1884
	Stewart, Dr R., 42 George Square,	1885
	Stirling, Dr R., 4 Atholl Place, Perth,	1892
350	Stirling, Dr Stewart, 4 Coates Crescent,	1866
	Story, Dr B. S., Catchgate, Annfield Plain,	1898
	Sturrock, Dr J. F., Arima, Broughty-Ferry,	1887
	Sym, Dr A. C., 144 Morningside Road,	1885
	Taylor, Dr David R., St Helen's, Ayton,	1896
355	Taylor, Dr William, 12 Melville Street,	1868
	Taylor, Dr W. Macrae, 12 Melville Street,	1895
	Teacher, Dr C., 8 Nile Grove,	1887
	Temple, Dr G. H., Ailanthus, Weston-super-Mare,	1888
	Thatcher, Dr C. H., 8 Melville Crescent,	1877
360	Thin, Dr Robert, 38 Albany Street,	1891
	Thom, Dr Alexander, Viewfield, Crieff,	1884
	Thompson, Dr James L., Castlemaine, Victoria, Australia,	1894
	Thomson, Dr A. D. R., Musselburgh,	1877
	Thomson, Dr James, David Place, Jersey,	1881
365	Thomson, Dr John, 14 Coates Crescent,	1887
	Thomson, Dr J. Stitt, The Mount, Lincoln,	1877
	Thyne, Dr T. J., 2 Dean Terrace,	1887
	Tod, Dr John, 93 Ferry Road, Leith,	1892
	Tristan, Dr R. J., 28 Carolgate, Retford, Notts,	1887
370	Underhill, Dr C. E., 8 Coates Crescent,	1872
	Underhill, Dr Frederick T., 1373 Barclay Street, Vancouver, British Columbia,	1885
	Underhill, Dr T. Edgar, Dunedin, Barnt Green, Worcestershire,	1879
	Vassie, Dr Alexander H., 98 Priory Road, West Hampstead, London, N.W.,	1891
	Vickery, Dr W. H., 52 Elswick Road, Newcastle-on-Tyne,	1892
375	Wade, Dr George, Melrose,	1893
	Walker, Dr Andrew, Sandon House, Brunswick Street, Sheffield,	1893

		Date of Admission.
	Walker, Dr A. Wallace, 24 Forth Street,	1886
	Wallace, Dr Abraham, 39 Harley Street, London, W.,	1879
	Watson, Dr Douglas C., 22 Coates Crescent,	1897
380	Watson, Dr P. H., 72 Jesmond Road, Newcastle-on-Tyne,	1887
	Watson, Dr R. H., The Glebe, Hamilton,	1896
	Waugh, Dr John, 36 Finsbury Pavement, London, E.C.,	1881
	Webster, Dr A. D., Belleville Lodge, S. Blacket Place,	1881
	Webster, Dr J. C., 287 Mountain Street, Montreal,	1889
385	Welby, Dr Frederick E., Colonial Surgeon, St Helena,	1889
	Whyte, Dr J. Curtis, Dalkeith,	1896
	Wilcockson, Dr G. Morton, 183 Southampton Street, Reading,	1893
	Wilkie, Dr James, Selville House, Portobello,	1897
	Wilkinson, Dr George, 109 Park Road, Liverpool,	1889
390	Will, Dr Ogilvie, 379 Union Street, Aberdeen,	1867
	Williams, Dr J. D., 20 Windsor Place, Cardiff,	1889
	Wilson, Dr James, 53 Inverleith Row,	1889
	Wilson, Dr T. D., 10 Newington Road,	1879
	Wise, Dr Robert, 5 Weston Park, Crouch End, London, N.,	1890
395	Wood, Dr Russell, 9 Darnaway Street,	1880
	Wood, Dr Thomas, 55 Ferry Road,	1886
	Wood, Dr William, 19 Roxburgh Street,	1892
	Woodside, Dr J. T., Holywood, Co. Down,	1898
	Wright, Dr W. F., Bonnington Mount, Bonnington Terrace,	1887
400	Yoe, Dr Richard T., 2103 Floyd Street, Louisville, Kentucky, U.S.A.,	1891
	Young, Dr Peter, 43 Heriot Row,	1859
	Young, Dr Peter A., 25 Manor Place,	1871
403	Young, Dr R. J. Erskine, 8 Alva Street,	1892

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TRANSACTIONS

OF THE

EDINBURGH OBSTETRICAL SOCIETY,

FOR SESSION LX., 1898-99.

MEETING I.—NOVEMBER 9, 1898.

DR J. HALLIDAY CROOM, *President, in the Chair.*

I. *The Treasurer* (*Dr W. Craig*) made his Annual Statement, which is given below:—

INCOME.

Balance from Session 1896-97,				£368	18	5
Arrears,	£5	6	0			
Bank Interest on Deposit Receipts,	2	16	1			
Interest on Consols,	6	15	4			
Entrance Fees from 19 new Ordinary Fellows	19	19	0			
Annual Contributions from 342 Ordinary Fellows,	85	10	0			
Composition for Life-Membership from 1 Ordinary Fellow,	5	5	0			
Transactions sold,	5	5	6			
				130	16	11
				£499	15	4

EXPENDITURE.

Commission to Collector,	£1	7	0			
Walls & Fraser's Account,	0	18	0			
Door-keeper's Salary, 8 Meetings,	1	0	0			
Carriage of Parcels, etc.,	0	0	6			
Oliver & Boyd's Account for Vol. XXIII. of Society's Transactions (500 copies),	65	13	9			
Oliver & Boyd's Account for Printing Billets, Postages, etc.,	17	1	8			
Rent of Rooms at 5 St Andrew Square,	4	10	0			
Waterston & Sons' Account,	9	6	9			
The Secretaries and Editor for Postages,	1	7	6			
				£101	5	2
Balance to New Account,[1]				398	10	2
				£499	15	4

[1] Of this Balance the sum of £250, 10s. 6d. is invested in 2¾ per cent. Consols.

The Treasurer's Accounts were audited by Drs Berry Hart and Macvie, and found correct. On the motion of *Dr Milne Murray* a cordial vote of thanks was unanimously accorded to Dr Craig by the Fellows.

II. The Society then proceeded to the election of Office-bearers for the present session, and the President announced the result as follows:—*President*, Dr J. Halliday Croom; *Vice-Presidents*, (*Senior*) Dr N. T. Brewis, (*Junior*) Dr J. W. Ballantyne; *Treasurer*, Dr W. Craig; *Secretaries*, Dr J. Haig Ferguson and Dr W. Fordyce; *Librarian*, Dr R. Milne Murray; *Editor of Transactions*, Dr J. W. Ballantyne; *Members of Council*, Professor Simpson and Drs A. Ballantyne, Melville Dunlop, F. W. N. Haultain, Owen Mackness, Macvie, D. Berry Hart, and T. Brown Darling.

III. The following gentlemen were elected Ordinary Fellows of the Society:—Gabriel Maurange, M.D., 6 Rue Tournon, Paris; and John Thomas Woodside, L.R.C.P. & S.E., Holywood, Co. Down.

IV. The resignations of Drs W. A. Gibson, Lovell Gulland, and W. M'Creadie were intimated and accepted.

V. PRESIDENTIAL ADDRESS:

ON SURGICAL INTERFERENCE IN GYNECOLOGY.

By J. Halliday Croom, M.D., President.

For the second time in my life you have done me the honour of placing me in this Chair, and, however unworthy I may feel myself of this renewed exhibition of your favour, I can only, in what remains of my term, throw myself unreservedly on your generosity, and do my best, however little that may be, in some small way to acknowledge the distinction you have conferred upon me.

Alas, such a compliment at your hands only unfortunately too vividly reminds me *tempora labuntur tacitisque senescimus annis.*

Gentlemen, this is the 60th session of our Society, and we can look back with satisfaction upon hard, steady work, enlightened here and there by no mean examples of genius, and certainly by many brilliant additions at once to the literature and the science of our department.

Originating under the exceptional brilliance of a Sir James Simpson, at a time when the discovery of anæsthesia marked an epoch in the history of Medicine, our Society has gone on adding, little by little, month by month, to the development of our knowledge of Obstetrics and Diseases of Women. And you must

remember that with Simpson, and with this Society, the science of Gynecology, as far as Scotland is concerned, began. He was the pioneer of this department, and from him gynecology got its first impetus. And in this Society, with that impetus gained from him, it has enormously developed and so flourished that I may say, with perfect deference, that our Edinburgh School of Gynecology has acquired an enviable prominence in the history of Medicine.

Other societies there have been which, combining medicine and surgery in all their branches, have met regularly, contributing to every sphere of medicine, but I venture to believe that there is no society in Scotland which has persistently met month by month, often fortnight after fortnight, and which, drawing its life from a special and comparatively small department, has lived and flourished as ours has done.

In looking back over the work of this Society for the last ten years, it is interesting to find that it has well preserved its name of 'Obstetrical,' for the papers communicated during that period have been more than twice as many obstetrical as gynecological. And it is well that it is so, for it must be remembered that the Society originated when obstetrics was a science and art, while gynecology was practically unknown. Since these days gynecology has expanded forth into a science, it might almost be said, of its own. Indeed, it is not going beyond the mark to say that gynecology has made such progress since these days that it has been divorced altogether from obstetrics and has become a separate and distinct department. The so-called 'obstetric physician' of our younger days, known as an important officer of every great hospital, has ceased to exist as such, and now he who would aspire to the charge of diseases of women in a general hospital must be a 'gynecologist,' and *ipso facto* a surgeon. Thus it seems to me that the department of diseases of women has trended away, by easy gradations, from the domain of medicine into that of surgery, and gynecology and obstetrics have become two distinct departments. The obstetric physician must be relegated to the lying-in hospital, while the gynecologist must be classed among the surgeons of a great hospital.

The therapeutics which thirty years ago held their sway over this department no longer occupy the all-important place they once did; and diseases of women have drifted away absolutely and entirely from the domain of the physician into that of the surgeon pure and simple.

No doubt this is to some extent natural. The development of abdominal surgery within the last thirty years has been so startling and phenomenal, that no wonder men have devoted their lives and their time to the perfection of this particular branch. The operation of ovariotomy is itself a striking example, and there can be no doubt whatever that, with the present generation, the *rôle* of the ovariotomist pure and simple exists no longer.

Now that operation, which is as safe as any other major operation in surgery, has, thanks to the obstetrician first and to the gynecologist after him, become an operation as much in the province of an ordinary surgeon as a hernia or a gastrostomy. But it must be kept in mind that this advance is due entirely to our department.

It must ever be, however, and will ever continue to be a difficulty with the surgeon who is not accustomed to either obstetrical or gynecological work, to make his diagnosis a certainty, and therein will always lie the crux with the surgeon when he takes pelvi-abdominal work in hand. This question of diagnosis brings us at once back to the domain of the obstetrician, with whom the diagnosis of pregnancy, for example, is part of his daily work, whereas the general surgeon has not the opportunity of perfecting himself in the differentiation of such conditions.

Now, this divorcement of diseases of women from obstetrics is not altogether without its disadvantages. The pendulum has swung, and swung very markedly, to surgery. That to surgery gynecology has owed its greatest victories there can be no question at all. One has only to think of the improvements in abdominal hysterectomy, and its fullest development in panhysterectomy, with, on the other hand, the conservative operation of myomectomy. These all are recent triumphs of the surgeon's art. Further, the last decade has witnessed remarkable improvement in the treatment of diseases of the uterine appendages. For while, no doubt, the removal of ovaries and tubes for inflammatory diseases has been enormously overdone, yet our experience has now crystallised our knowledge with regard to the pathological conditions for which these structures can be conscientiously removed. We cannot be too glad to recognise that the tendency now is becoming more and more conservative, and that the perfected methods of antiseptic surgery enable us to deal with even limited areas which are affected in ovaries and tubes which are not entirely diseased. The ease and safety with which complete salpingo-oöphorectomy can be performed must ever be a reason why we should safe-guard this operation as much as possible; and fortunately we are now in a position to realise that only in grave pathological lesions should these organs be entirely removed. Those of us who have been in the habit of dealing with morbid pelvic conditions must have become impressed with the fact that removal of the ovaries for merely inflammatory conditions is by no means a uniform relief to the symptoms, and often has grave and serious effects upon the patient otherwise.

Of tubal affections none can be more important than tubal pregnancy; and the treatment of extra-uterine gestation has become, within the last fifteen years, one of the recognised triumphs of gynecological surgery. The means of dealing with a tubal pregnancy before rupture are quite well determined, and its removal is a matter of comparative safety compared with the risks of rupture.

But even after rupture has taken place, it can be, and often is dealt with quite successfully. The difficulty in dealing with extra-uterine pregnancy will always be one of diagnosis.

But even here, great and pronounced as the surgical advance has been, it is just possible that, in dealing with extra-uterine pregnancies, especially early ones, the resort to the knife has been overdone, and many early ectopic gestations, even after rupture, have been absorbed and have disappeared without the arbitrament of the knife.

In pelvi-abdominal surgery by the vaginal route the advances have been no less remarkable. The dealing with uterine cancer by the entire removal of the uterus per vaginam has developed enormously within the history of the Society. The operation can now be done in a few minutes, and that this indicates an enormous advance in technique it is impossible to deny. But the question comes to be, Does the operation, so shortened and so simplified, tend much to the prolongation of life of the patient? It certainly has made the removing of a cancerous uterus a simple and easy procedure, even in moderately advanced cases. But I doubt if it has done much, if anything, to prolong the life of the patient, or to ameliorate her sufferings; and for this reason, that the disease after hysterectomy proceeds rapidly to the peritoneum, where it produces for the patient sufferings and a death worse than if no operation had been done at all.

That a vaginal hysterectomy stops hæmorrhage and fœtid discharge, and relieves pain, there can be no question at all. But this is only a temporary improvement. And for this dire disease even a temporary alleviation of these symptoms would be an advantage, were it not that, with the recurrence of the disease, the ultimate pain and suffering are greater than if it had never been touched at all.

Here and now it is not my business to discuss whether cancer begins generally or locally. The great pathological warfare of twenty years ago between Paget and Hutchinson remains still unsettled, but I believe the consensus of opinion is in favour of the view that it is primarily a local disease which later attacks surrounding and distant parts, and infects the system generally. If this be so, of course the argument for removing the uterus, when it is the centre of the infection, remains as strong as possible. And naturally, if the gynecological surgeons were able to see the cancerous uterus at its initial stage, and remove it, no doubt good results ought to be anticipated. But such is, unfortunately, not the case.

After an experience now of twenty years, including twelve years as physician in the Royal Infirmary, I have tabulated every case that has come under my special supervision. They amount to 260 cases. It is twelve years ago since I did my first vaginal hysterectomy for cancer. That operation lasted two hours and a

half, and, as a proof of the advance in technique and of the ease with which the operation can now be performed, the last I did was performed in eighteen minutes. I have diligently observed every case of malignant disease of the uterus that has come under my observation with a view to the performance of that operation, and of the 260 cases only fourteen have fulfilled all the conditions requisite to justify hysterectomy with expectation of success. I have carefully operated upon all of these cases. All the operations have been undertaken with the assistance and approval of my colleagues, and here and now I wish to say, speaking the absolute truth, that these fourteen patients on whom hysterectomy was performed—although they all, to use the ordinary hackneyed phrase, made absolutely uneventful recoveries—died, every one of them, within the year, and, in my opinion, with greater suffering than if they had been left alone.

Now this applies, unfortunately, to several cases in which the disease was absolutely confined to the fundus, and where, so far as I could find, there was no involvement of the broad ligament whatever, these cases being typical examples of the desirable cases on which to operate. And yet in all the disease recurred in the peritoneum and the patient died in great distress within the year.

Now, given that the diagnosis of cancer is made at its most initial stage, with due care and attention a woman's expectation of life may be from two to two-and-a-half years. I ask, with the best statistics available, whether she has a better prospect if the cancer be left alone, or if it be interfered with by hysterectomy. Many forms of cancer are painless. Most of them destroy life through hæmorrhage, exhaustion and uræmic poisoning, etc. The question is, Do women live longer lives and die less painful deaths if the uterus be removed, or if the disease be allowed to run its ordinary course? For my own part I do not think that surgical interference is the better.

I know well that I shall be confronted with the German statistics. It is not becoming in me to question these statistics; but I do not think that either this country or America, whatever the explanation may be, has given us results at all in comparison with what the Germans claim. For example:—At the end of five years Fritsch had 36 per cent. of cures. Hofmeier, 33 per cent. after four years; Schauta, 47 per cent. after two years. At the Dresden clinique, of eighty patients examined two years after operation, forty-five had no recurrence. Of fifty-eight examined after three years, 58·6 per cent. were well. Of forty-two patients after four years, in 59 per cent. there was no recurrence. Of thirty after five years, 60 per cent. were well, whilst two survived seven years. Leopold states what seems to me the most startling statement in surgery, that out of seventy-six cases seventy-two were well and without recurrence after one to five-and-a-half years.

If these figures are true—and I have no desire to traverse them—I can only say that cancer in Germany must be one thing and cancer in Great Britain another; that the respective diagnostic skill of the two countries must vary considerably, or that women must present themselves to the German surgeons at a period when the disease is in its most initial stage, when it is still confined to a small nodule in the cervix, or limited to the mucous membrane of the fundus; for I cannot conceive that results such as I have referred to are obtainable after the disease has advanced, where the lymphatics and glands are involved, or still less when the uterus has become fixed.

The opportunities of the Edinburgh Infirmary and of private practice give us, alas, only too ample scope for seeing and diagnosing cancer, and my own sphere of experience has been a reasonably large one; and I repeat that in all these years, fourteen only have been seen early enough to render a successful issue probable, and these have died within a year of operation. As a further explanation of the discrepancy, may I venture to suggest, without multiplying examples, that within my own personal knowledge cases of marked cervical catarrh with gross erosions have been regarded as cervical cancer and removed as such, and it is very easy to mistake an advanced senile uterine catarrh of a pronounced type for a fundal cancer. In my own cases I need hardly say that, before operation was undertaken, in each of them the suspected tissue was examined microscopically and the diagnosis thus absolutely established. It is true some gynecological surgeons tell us that, as the senile uterus is of no further use, when there is any doubt it is better removed; and, for example, they will tell us further that, after removing the ovaries by the vaginal route, the uterus may as well also be removed for the same reason—but, I ask you, is this surgery? The ablation of an organ because it is of no further use is no argument; the point in surgery, so far as I see, is only to remove those organs, or those portions of organs, which are absolutely diseased, and which shorten life, or are seriously interfering with health. The conditions to which I have just referred do neither.

Further, if we take and carefully look over these statistics, we shall find that they are, to say the least of them, somewhat ambiguous. And we shall further find that, even though a woman lives two years after the operation and has no return, it is doubtful whether she lives longer and dies happier than if the uterus were left *in situ*.

The whole point of the matter is this, that it is quite conceivable that, with a cancer very early diagnosed and operated upon, the prolongation of life is possible, although, unfortunately, such has not been my experience; but, after a cancer has developed beyond its most initial stage, I hold and believe that the removal of the organ does not prolong life, and that the subsequent death is infinitely more terrible.

Now, if the disease be local in its origin and only affects the system secondarily, one naturally asks why the alleged results are so satisfactory in the mamma, and apparently so unsatisfactory in the uterus. The answer seems plain. It is the old question of early recognition. And the possibilities of early recognition in the mamma and in the uterus are totally different. Every woman recognises a small swelling in her breast at once, and seeks for immediate advice; whereas a woman may have uterine discharges, leucorrhœal and even hæmorrhagic, and pain and discomfort for months, without taking any notice of it whatever. If it were possible to recognise early cancer in the uterus as well as in the mamma, of course it is possible, as I have just said, that the results would be somewhat better. Furthermore, we must remember that whereas in the breast the lymphatic connections and glands can be dealt with, and are regularly dealt with, whether they appear to be affected or not, it is otherwise in the pelvis. And perhaps Howard Kelly, acting on Freund's suggestion, may be in the right lines in giving up vaginal hysterectomy for cancer, and dealing with the whole uterus and broad ligament from above. But this procedure is, to say the least of it, still *sub judice.*

Since Freund, in the late seventies, first of all introduced abdominal hysterectomy for cancer, and afterwards abandoned it, because of its high mortality—somewhere about 76 per cent.—vaginal hysterectomy in the hands of Fritsch, Leopold, Landau, Martin, Olshausen, Doyen, etc., has undergone a varying course of evolution, until now the operation is as perfect as it can be, and the immediate mortality, which at first was 15 to 25 per cent., has fallen to practically *nil* even in my own hands. But I wish to point out that records such as appear from time to time in our journals, of successful cases of vaginal hysterectomy for cancer, mean absolutely nothing at all, because to give a series of tables of successful hysterectomies, winding up with the stereotyped phrase, 'the patient left the hospital well,' is no addition to our knowledge of results. The operation has been so improved that anything less than a successful immediate issue would be scarcely warranted. No one for one moment would dream of detracting from the merit attaching to those eminent surgeons who have so improved and evolved the technique of the operation, and rendered it, so far as its immediate results are concerned, an absolutely safe one; but much though we may admire that, and heartily give them every meed of praise, yet we must look beyond the immediate present to the no distant future of the operation, and from dealing with the names of the eminent to whom I have just referred, I am bound, as a humble worker in the department, so far as it is of any interest to the Society, to descend to myself and state my own experience.

Some of us have lived long enough to observe and note how various operative interferences have come into vogue, flourished and died.

Far be it from me to decry operation. I have myself opened the abdomen for one reason or another upwards of 1000 times, therefore I cannot be classed among the non-operating gynecologists; but, on looking back over a considerable experience, I am unable to recall much benefit that has accrued from surgical interference as far as the cancerous uterus is concerned.

That the subject of cancer should have occupied the best minds of the greatest men is not a matter of surprise. When we consider the hopelessness of the disease, and the pain and suffering which are its invariable accompaniments,—this, I say, is not a matter for surprise. Still less do we wonder when we think of its extraordinary prevalence. After mammary cancer, the uterus is by far the most frequent seat of the disease in women. I believe I do not overstate the case when I say that at the present moment there are at least 8000 women—probably a great many more—suffering from uterine cancer in the United Kingdom.

For, rely upon it, there is no more pressing subject; for it seems to me that, in our efforts to cure or ameliorate cancer, we have come against a dead wall. Whether it is possible that we may have got a suggestion in removal of the ovaries for the cure of inoperable mammary cancer, and whether the same operation may offer a possibility for uterine cancer remains a moot question. It is also possible that the solution may still be found in treatment by some animal extract or on the antitoxin principle, which has been found so valuable in diphtheria and tetanus.

Nothing, certainly, can be more remarkable than the accidental discovery of what has proved a most marvellous remedy for myxœdema, in the treatment by thyroid extract. And, in our own department, we have a similarly striking example in the accidental discovery and development of the results which follow upon removal of the ovaries in cases of osteomalacia. For our knowledge of this question we are much indebted to one of our own Fellows, Dr James Ritchie. Whether this condition be due to zymotic influences, to reflex nervous phenomena, to dietetic causes, or to altered chemical changes, the fact remains that many cases have been recorded in which a cure has been obtained by oöphorectomy. In our groping for light as to a malady which is in itself absolutely fatal, and which, I fear, according to recent statistics, is increasing, it is our duty to keep an open mind for any theory, and to welcome any suggestion, however extreme, in dealing with this awful disease.

While at the present day every surgical proceeding is accepted and adopted, it is striking to think how medical innovations are received with distrust. Even anæsthesia, that has revolutionised the whole of medicine and surgery, was on its first introduction scorned and regarded in the light of charlatanism.

It is interesting now to look back after this interval of time, and to reflect how this wonderful discovery, associated as it is so

intimately with the founder of our Society, was received in England. It is best told in the late Sir Russell Reynolds' own words :—

"The first operation in England performed under an anæsthetic was witnessed in University College Hospital. Liston had consented to try the anæsthetic. I can see him," says Sir Russell Reynolds, "as he said to the students, 'Gentlemen, we are going to try a Yankee dodge for making men insensible.' At length Peter Squire said, 'He is quite ready now, sir.' Liston's knife flashed in the air. I took out my watch to count the time, and the leg was on the floor in twenty-six seconds. Liston turned to the students and said, 'This Yankee dodge, gentlemen, beats mesmerism hollow.'" Such is Sir Russell Reynolds' report.

The great discovery had to make its way against obstinate prejudice and folly, and Liston's grudging utterance should serve as a warning to those of us who make light of new methods, only because they are new.

Looking back over thirty years' experience,—from the escharotic treatment, the chian turpentine epoch, the various amputations, curettings and hysterectomies,—I am rather disposed to think that the surgical method of dealing with uterine cancer has done little either to ameliorate suffering or to prolong life, and that once a uterine cancer is recognised, palliative local measures and a happy euthanasia through morphia are the best solutions of the difficulty.

Such a statement may have the verisimilitude of despair, and, so far as I personally am concerned, that is my position. I hope and trust that the day may yet dawn when we shall have measures, whether therapeutic or surgical, of dealing with uterine cancer effectively, but I confess that I do not believe it has dawned yet.

Perhaps these statements are somewhat at variance with the gist of the address I had the honour of making as President of the section of Obstetrics to the British Medical Association some years ago. Then I was captivated with the wonderful improvements made in the technique in the operation of vaginal hysterectomy by Doyen of Paris, and introduced to us here, especially by Professor Simpson.

Unfortunately, so far as my own personal experience has been concerned, improved technique has not bettered my results. For the last series of cases have all been done with this enormous advantage, but without any improvement in the ultimate result.

I have honestly stated my own experience, and I shall be only too pleased if, whereas my work reads failure, the results of the other Fellows of this Society give a more optimistic view of the case.

You will perhaps say to me that I have taken undue advantage of my position here to discuss a question of enduring interest

from my own side, and in this way have avoided due criticism. But this is not so, for I hope to place before you the whole of my cases in detail, at no far distant date.

With regard to hysterectomy for conditions other than cancer, such as prolapsus, subinvolution, and inflammatory disease of the uterus and appendages, the operation is one which, from its simplicity, requires to be safeguarded. Like the removal of the uterine appendages for inflammatory disease, this operation bids fair to be overdone. Unlike uterine cancer, none of these diseases are in themselves necessarily fatal, and the symptoms and discomfort to which they give rise can in many cases be alleviated by other less drastic measures. I am free to admit that there are cases for which the operation offers perhaps the best prospect of cure, such as small bleeding fibroids and prolonged hæmorrhages from the uterus, which have resisted all other means of treatment; but such, so far as my own personal experience goes, are comparatively rare.

With regard to fibroids, removal of the ovaries for bleeding or rapidly growing tumours is gradually being supplanted by the operation of abdominal hysterectomy, an operation much more certain in its results, though more dangerous for the moment. This operation had at one time such an alarming mortality as to be quite deterrent. Even yet the death-rate is most undesirably and perhaps needlessly high, and it is an operation which, except in the hands of experienced operators, is not to be undertaken without considerable anxiety.

The improvements in this operation have been no less remarkable. The ligature of the broad ligaments and uterine arteries; the substitution of the intra- for the extra-peritoneal stump; the complete removal of the whole organ by pan-hysterectomy; and the remarkable results obtained by both foreign and British operators, make this a more thorough and reliable method of dealing with these growths than any. It is further possible, in most cases, to have recourse to this operation when the safer and simpler operation of removing the ovaries has failed to give the desired relief.

In a large number of cases, especially when the tumour is of considerable size, removal of the ovaries is an impossibility, and hysterectomy is the only means of dealing with them. We now recognise that the inconveniences and dangers of fibroid tumours do not by any means cease with the menopause, but I must say that I have no sympathy with the indiscriminate removal of these simple tumours, and I can never conscientiously advise a patient to undergo the risk of hysterectomy, unless urgent symptoms, such as rapid growth, mechanical pressure, hæmorrhage, or malignant degeneration (which is itself a curiosity) present themselves.

In conclusion, while we can look with reasonable pride on what our Society has accomplished in the past, through your kindness it falls to me once again, as your president, to

remind those of you who are amongst our comparatively younger Fellows, that the future—here an almost limitless one—lies wholly with you, a future which I believe is secure in your hands. Your pathways must lie, I believe, in a middle course between the *nimia diligentia* of the surgeon, and the somewhat tardy methods of the physician. One thing must be for ever abnegated, and that is self. The atmosphere and condition of your work is favourable and congenial; for, in whatever else we may be as a department wanting, we may congratulate ourselves on this, that our work is free from the contention of petty personal jealousy, and is directed in its sole aim and object to the advancement of science, which, aright translated, reads—the alleviation of human suffering.

On the motion of *Professor A. R. Simpson*, seconded by *Dr Underhill*, a cordial vote of thanks was proposed to the President for his Address.

VI. NOTES OF A CASE BEARING ON THE LATENCY OF GONORRHŒAL INFECTION.

By R. Milne Murray, M.A., M.B., F.R.C.P.E., Lecturer on Midwifery and Diseases of Women, School of Medicine; Assistant Physician, Royal Maternity Hospital, etc.

I have ventured to bring the following case before the Society on account of its bearing on the question of the latency of gonorrhœal infection, even although, in some respects, it is defective as a clinical record.

In November 1890, a young man, with whom I was personally acquainted, came to me suffering from an acute attack of gonorrhœa. I advised him to put himself under the care of a surgeon, and I did not see him again for some months. He told me then that he was quite cured, and that he was in excellent health.

In January 1895, he called to tell me he had got married, and that his wife, who expected her confinement in June, wished me to attend her. She was confined on the 11th June. The labour was quite normal, and recovery took place without incident. She was confined again on the 6th January 1897, and again a normal labour was followed by a quick and satisfactory recovery. On August 3rd of this year she was confined for the third time. The labour began about 9 A.M. I saw the patient about 10. The waters ruptured about 11, the os being fully dilated and the head well into the cavity. About mid-day the child was born. The child, a girl, seemed in all respects well developed and healthy. On the morning of the third day, I happened to notice the child in the nurse's arms and observed that the left eyelids were slightly reddened along the edge, and that a small quantity of serous

material was oozing from between them. I told the nurse to bathe the eye with some warm boracic lotion. Next morning I found that a considerable quantity of thick yellow pus escaped from the child's eye on pressure, and on everting the lids, found the palpebral conjunctiva intensely injected and considerably thickened, and the eye flooded with pus.

I gave orders to the nurse to wash the eye every hour with 1-4000 corrosive lotion by means of a syringe, and gave her instructions about the other eye, etc.

I saw the child again in the evening, and found pus welling still more freely from the eye and a considerable increase in the palpebral thickening. I washed the eye myself and painted the conjunctiva freely with a solution of silver nitrate, 10 grs. to the ounce.

On this occasion I made particular inquiries of the mother as to the presence of any leucorrhœal discharge, but she assured me that she never had anything of the sort. For two days the hourly washings were continued and the silver nitrate solution was applied twice daily. On the third day the palpebral conjunctiva had become so thickened as to cause great eversion of the lids, so that the red mass stood out between the lids, and the quantity of pus which poured from them was still very large. I had never, even in the old days of the Maternity Hospital practice, seen a more acute attack of ophthalmia, and I began to fear that the eye was doomed. On this afternoon I painted the eyelids freely with a solution of nitrate of silver, 70 grs. to the ounce, and ordered the washing to be repeated every half-hour. This was faithfully carried out, the father relieving the nurse at night. Next day the eye had much improved, and on the morning of the seventh day the symptoms had so much subsided that I reduced the washings to once in two hours, and concluded the danger was over. That evening the father came to tell me he was afraid the other eye was going wrong, and sure enough, when I reached the house, some pus was escaping between the lids of the right eye. Next morning the ophthalmia was fairly established, and, I may say, ran a similar, though scarcely so virulent a course as the other. This may have been due to the fact that I began the use of the strong silver solution on the second day and kept it up along with the frequent washings.

Up to the time of the infection of the second eye, I had never had an opportunity of a private interview with the father, but on this occasion I obtained one, and at once taxed him with having contracted another gonorrhœa. This he at once most solemnly denied, and protested that he had never had but the one attack eight years ago, and that he had, moreover, been absolutely faithful to his marriage vows. From my own knowledge of the man and of his habits of life, I have no difficulty in believing this. Moreover, his wife has certainly had no symptoms of any acute infection at

any time. She is a highly nervous and acutely observant woman, and I am quite sure would never have overlooked the slightest abnormality such as would be associated with acute infection.

In so far as it bears on the proof of the latency of gonorrhœal infection, such a case as this obviously presents two weak points.

The first is, that no direct proof was obtained that the infection was really gonorrhœal. Owing to an unfortunate accident a set of cover glass specimens of the discharge went astray without being examined, and I did not know of this until it was too late to secure another trustworthy sample. That the cause of the ophthalmia was a specific organism of a very potent character scarcely admits of a doubt, and I am not aware that any other than the gonorrhœal organism is credited with such virulent manifestations. My experience is long enough to go back to the time in the Maternity Hospital before Credé's prophylactic measures had, in great measure, stamped out the development of gonorrhœal ophthalmia in the new born. And I have never seen a case in which the appearances were more characteristic. On the other hand, this is the first case of purulent ophthalmia I have seen in my private practice, and I have attended many women with profuse leucorrhœa at the time of their confinements. In no case in private practice do I take any precaution other than careful wiping of the eyelids immediately after birth—a measure which was employed in this case as in the others.

To my mind the clinical phenomena seem sufficiently conclusive, though certainly the absence of microscopic corroboration is greatly to be regretted.

The second weak point in the evidence is one which must apply to many of the cases on which the opinion as to the latency of the infection has been based. It is, of course, that the determination of the nearness or remoteness of the primary infection depends entirely on the veracity of the party concerned. One is only too familiar with the utter disregard of truth in the statements of those concerned in matters of sexual impropriety, and one hesitates to accept any statement made under such circumstances which seems to contradict experience, except under the most exceptional conditions. My reasons for accepting the statement of the husband here are partly personal—my knowledge of the man and his habits of life and thought, and partly on the entire absence of any symptoms of infection at any time on the part of the wife.

Such evidence, I admit, is not conclusive, and it is open to anyone to say that it is more likely that in spite of the asseveration of the husband the infection was quite recent. But, of course, such an opinion might apply to almost any of the cases which have been adduced in proof of gonorrhœal latency by such authorities as Noeggerath, Tait and Macdonald.

Most authorities accept it as proved that the latency of the

infection may extend over say two years. In how many cases can an absolute proof be obtained that the cause of the particular condition referred to, the remoter infection is not to be found in a more recent one.

If, on the other hand, we assume that in this case the ophthalmia was gonorrhœal, and that the infection was due to the original attack in 1890, we have a period of eight years between the two events. This is certainly a long period, but not longer than those specified by Noeggerath and Tait.

It is somewhat remarkable that the first two children escaped the infection. Whether this was due to the more careful and effective cleansing of the eyes in these cases, or to the mother's canal being, for some reason, less infective than on the third occasion, it is impossible to say.

The immediate interest of the case seems to me to consist in the fact that the child may develop a dangerous ophthalmia after an easy labour from a mother apparently in perfect health and without any abnormal discharge. The indirect interest lies in the probable connection of this with the father's infection eight years before and three years before marriage. And on these grounds I thought the case of sufficient interest to submit to you to-night.

Dr J. W. Ballantyne thought Dr Murray had proved his point, and that the gonorrhœa had really been latent. He had been struck, however, by an occurrence in his practice recently which demonstrated that in some cases another explanation of gonorrhœa in the wife was possible, and that without the inculpation of the husband. The case was that of a newly-married couple; the husband confessed to having had a gonorrhœa three years previously, but on examination he showed no sign of it; the wife certainly had gonorrhœa. At first he ascribed the wife's state to the latent gonorrhœa of the husband, but subsequent legal proceedings suggested that the wife had contracted the infection from another man whose gonorrhœa was active.

MEETING II.—DECEMBER 14, 1898.

DR J. HALLIDAY CROOM, *President, in the Chair.*

I. The following gentlemen were duly elected Ordinary Fellows of the Society:—G. F. Barbour Simpson, M.B., Ch.B., Royal Infirmary, Edinburgh; Alfred C. Sandstein, M.B., Ch.B., Royal Maternity Hospital, Edinburgh; Alfred Shearer, M.B., Ch.B., Royal Maternity Hospital, Edinburgh; J. H. Rhodes, M.B., Ch.B., Royal Infirmary, Edinburgh; J. D. Slight, M.A., M.B., Ch.B., Royal Infirmary, Edinburgh; F. J. Harvey Bateman, B.A., M.B., C.M., Royal Infirmary, Edinburgh.

II. The President showed—(*a.*) A MISSED ABORTION.—The patient, aged 26, had had three previous pregnancies, two at full term and an abortion at the fifth month between these. The last child was born eighteen months before admission to Ward 28, on June 28th of this year. She complained of a feeling of weight in the hypogastrium, which was getting worse. Menstruation had been regular till August 1897, then ceased for nearly four months. She gave a history of having strained herself at that time, and a slight hæmorrhage occurred. She had suffered from morning sickness up to this time, but this now ceased, and she noticed that her breasts, which had been full, became smaller. Occasionally, but rarely from December onwards, there were slight hæmorrhages without any regularity. *P. V.* the uterus was enlarged, anteverted and about the size of a three months' pregnancy, but distinctly harder than in a normal pregnancy. Diagnosis of retained ovum was made and the cavity of the uterus cleared out. The fœtus was somewhat shrunken though not markedly so, but the placenta was very fatty and small. This case is not of the usual type of missed abortion in which the great shrivelling and even disappearance of the embryo is a marked feature, but such cases as this are also classed as missed abortion. The fœtus was fairly well preserved, and had undergone but little change.

(*b.*) AN OVARIAN TUMOUR COMPLICATING PREGNANCY.—The patient was four months pregnant when she was suddenly seized with an acute pain in the right side. On examination an ovarian tumour was found lying to the right of the uterus and still lying partly in the pelvis. A fortnight later the patient had a fall, and when seen a few days afterwards the tumour was found lying under the liver. If one had seen the case then for the first time the diagnosis would have been extremely difficult, but as it was apparently very movable it was thought advisable to operate. On laparotomy the tumour had all the signs of recent hæmorrhage into the sac, and there were already numerous adhesions all over the surface. The pedicle was markedly twisted, which torsion no doubt occurred when the tumour was suddenly passed entirely free of the pelvis. This accords with my previous experience of a very definite cause of twisted pedicle.

(*c.*) A PAROVARIAN CYST, the close proximity of which to the uterus caused great difficulty in diagnosis.

III. *Dr Brewis* showed—(*a.*) AN OVARIAN TUMOUR AND A CALCIFIED FIBROID TUMOUR removed from a patient, aged 74; (*b.*) A FIVE MONTHS' PREGNANT UTERUS removed for Cancer of the Cervix; (*c.*) SPECIMENS FROM TWO CASES OF HYSTERECTOMY.

IV. *Dr J. W. Ballantyne* showed—(*a.*) FROZEN SECTIONS OF A FŒTUS HARDENED IN FORMOL. The specimen, which had been sent to him by Dr Rorie of Cardenden, showed the typical

appearances of the anencephalic monstrosity. It had been frozen and cut in the usual way. It was then placed in a 2 per cent. solution of formol for 48 hours, was then washed, and transferred to a weak solution of spirit. In this it had been kept for nearly six months, and the result had been satisfactory. There had been very little shrinking, and the colours, especially the green of the meconium, had been well preserved. With regard to the clinical history, the most interesting fact was, that this was the second anencephalic fœtus to which the patient had given birth; she might therefore be called a monstripara. The first child was born quite naturally and is a healthy youngster; the second, a female, born in February 1897, was anencephalic; and the third, a male (the present specimen), was born in June 1898, and was also anencephalic.

(*b.*) A LARGE MULTILOCULAR OVARIAN CYST which he had removed from a lady, 38 years of age, who had had eight full-time labours and three miscarriages. Several of the confinements had been complicated by severe post-partum hæmorrhage. The last was about ten years ago. Ovariotomy was rendered necessary by the rapid growth of an abdominal tumour, which was first regarded by the patient and her medical attendant abroad as a pregnancy. It was soon evident, however, that the abdomen contained either a cystic fibroid or an ovarian cyst. When she arrived in Edinburgh the indications for immediate operation were so pressing that I performed abdominal section at once, notwithstanding that she was menstruating. She had for several weeks been kept in life chiefly by means of champagne, and had been having large dozes of morphia hypodermically for the great abdominal pain. The tumour was found to be a large multilocular cyst of the left ovary, with numerous and very vascular adhesions to the abdominal walls and to the intestines. It was necessary to make a very long incision, and to irrigate the peritoneal cavity for some time. The operation lasted two hours, but was satisfactorily completed, although there was a good deal of collapse. The recovery was quite uneventful, the temperature only once touching the 100°, and flatus passing freely on the second day. Since the other ovary (the right) showed signs of commencing cystic degeneration, it was removed at the same time. The unusual feature of this ovariotomy was the difficulty experienced in separating the numerous and vascular adhesions; high up in the abdomen anteriorly the tumour was so intimately united to the intestine that it seemed both to Dr Ballantyne and to Dr Fordyce who assisted him, that the cyst had insinuated itself between the folds of the mesentery. Since, however, the pedicle was free, it seemed difficult to account for this peculiar relation, and probably after all it was only a very complete adhesion.

(*c.*) A LARGE UNILOCULAR OVARIAN CYST, the removal of which was in striking contrast to that of the specimen just described.

The patient, a young married lady with three children, was, save for the presence of the abdominal swelling, in the enjoyment of perfectly good health. The abdomen was opened by a very short incision; the tumour consisted of a single cavity; there were no adhesions, there was no free fluid in the peritoneal cavity, and the other ovary was normal and was not interfered with. The recovery was, save for one slight incident, quite uninterrupted; that was the apparent insomnia which attacked the patient, and which gave Dr Ballantyne and the nurses some anxiety. This the patient herself dissipated when she volunteered the information that she scarcely ever slept longer than two or three hours a night. She certainly recovered perfectly with a wonderfully small amount of sleep.

(*d.*) A VULVAR EPITHELIOMA removed by the thermo-cautery from a lady nearly seventy years of age. It was situated at the posterior border of the vulva and partly on the perineum, and he had removed it more to relieve symptoms than in the hope of affecting complete cure, for the inguinal glands were enlarged, and there seemed to be some extension up the vagina. The Paquelin was applied pretty freely, and it was now two-and-a-half years ago and there had been no recurrence. The tumour was examined and reported upon in the Laboratory of the Royal College of Physicians; it was a typical epithelioma.

(*e.*) TWIN FŒTUS AND PLACENTA SHOWING THE FIRST STAGE OF SYMPODIA. This interesting specimen had been given him by Dr R. A. Lundie. The mother of the twins was a healthy woman, who had had four normal confinements, an early miscarriage, a normal labour, a miscarriage at the fifth month, and finally this twin-birth. The one twin was a healthy well-formed boy, the other was a small fœtus shown. There was a single placenta, the greater portion of which belonged to the normal infant; and each twin had its own amnion. The malformed twin, which seemed to have died about the mid-term of pregnancy, showed membranous union of the lower limbs along with partial rotation of them, so that the right heel looked forwards. It seemed, therefore, that this specimen represented that very rarely observed monstrosity, the first stage of sympodia or the sireniform fœtus. A full account of the dissection would be given at a future meeting of the Society.

(*f.*) THE SECUNDINES FROM THREE CASES OF PLACENTA PRÆVIA. He had had the unusual experience of meeting with three cases of placenta prævia in private practice within the short period of six months or so. In all, the treatment adopted had been plugging and dilatation of the cervical canal with the hydrostatic dilating bag of Champetier de Ribes; in all the labour came on prematurely; and in all the placenta prævia was of the marginal variety, and the hæmorrhage very profuse. In one case the patient was a xv.-para, who had had a series of ten normal labours

and then five consecutive confinements with low implantation of the placenta. In this instance dilatation with the Ribes' bag was followed by forceps application; both mother and child did well, but the latter was delicate, and died subsequently. In the second case the mother had not had a child for several years. The dilatation was followed by version; the mother made a good recovery, although she had lost a very large amount of blood; the infant had died before delivery was affected. The third case was that of a primiparous woman who was also the subject of chronic Bright's disease; labour came on about the seventh month, and dilatation was effected with very great difficulty; the fœtus, which had been dead for some hours, was delivered by version, and the mother made a good recovery.

V. *Dr Haultain* showed—A UTERUS SUCCESSFULLY REMOVED BY VAGINAL HYSTERECTOMY FOR DECIDUOMA MALIGNUM. The uterus was removed from a woman 28 years of age, who nine weeks previously had been delivered of a myxomatous mole. Since that time she had had irregular and profuse hæmorrhages, in spite of curetting and other treatment. From a previous curettage a portion of the scrapings was examined, and showed a large number of malignant cells of great size and with enormous nuclei. The operation was simple, and has been so far followed with the best results. The uterus shows a small growth about the size of a large hazel nut in the left upper corner. This is ulcerated, and appears highly vascular. Microscopic sections show it to be composed of large malignant cells of an appearance similar to those described as deciduoma malignum. It is my intention to bring before the Society at a later date a complete investigation of the growth.

VI. NOTE ON A CASE OF CHRONIC INVERSION OF THE UTERUS REPLACED BY MANIPULATION AFTER POSTERIOR COLPOTOMY HAD BEEN PERFORMED.

By J. W. STRUTHERS, M.B., Ch.B., late House Surgeon, Leith Hospital.
Communicated by Dr BERRY HART.

MR PRESIDENT AND GENTLEMEN,—Cases of chronic inversion of the uterus are rare enough now to merit special record, and the ease with which this case yielded to operative treatment is an additional reason for bringing it before the Society. The patient was admitted to Leith Hospital under the care of Dr Berry Hart while I was house surgeon, and Dr Hart very kindly suggested that I should bring the case before the Society.

The case is as follows:—

Mrs M., aged 38, was admitted to Leith Hospital on October 3rd, 1898, on the recommendation of Dr Whitelaw.

Her complaint was: excessive discharge at menstrual period and constant intermenstrual discharge.

The history was that nineteen months before admission patient had been delivered of her eighth child. The labour was precipitate; she had slight pains for two or three hours, and then the child was born quite suddenly on to the floor. A doctor was sent for, who removed the after-birth without any difficulty, and told the patient that her womb had 'come down.' There was no post-partum hæmorrhage, and patient went on quite well for a week. At the end of the first week, while in the act of micturating out of bed, something came down outside the vagina which she described as resembling a hard ball. There was no pain and no hæmorrhage.

She sent for her doctor, who examined her and said that the womb was down again. It was easily replaced in the vagina, but as far as can be made out from patient's account no attempt was made to reduce the inversion. She was ordered to lie in bed for a month, which she did.

Except for the protrusion of the uterus mentioned above, she had no trouble during the puerperium. The lochial discharge was not excessive. At the end of the prescribed month, and five weeks after the birth of the child, she got up and went about her usual domestic work. She felt weak, but had no trouble with the womb in any way. She nursed her child for thirteen months, and remained well all that time except for the feeling of weakness mentioned. At the end of that time menstruation began again; the first period lasted ten days, and the discharge was copious all the time, but especially so during the last three days. After the flow of blood stopped, a yellow watery discharge began and continued without intermission till next menstrual period, which again lasted about ten days, with excessive discharge all the time. From this time up to date of admission, patient continued to have constant intermenstrual watery discharge of yellow or light red colour and menorrhagia as above.

She has never had any pain, but has got gradually paler and weaker since the discharge began, and is now at time of admission unable for any work owing to weakness. She has not got appreciably thinner.

Twice in the course of her illness she consulted medical men, and she says that on each occasion an instrument was put in, but would not stay in the vagina.

Previous History.—She has always been a healthy woman: has been married for fifteen years, during which time she has had eight children altogether. The first seven labours were all natural and easy, each lasting about a day.

Menstruation had always been of the 28-day type, lasting three to four days; discharge not excessive in amount up till present illness.

State on admission.—Patient is a fat, well-nourished woman, but the face, lips, and conjunctivæ are very pale. Temperature 99·4°.

Genito-urinary System.—Examination of the abdomen reveals nothing abnormal.

On passing the fingers into the vagina they almost immediately come in contact with a smooth firm body, about the size of a hen's egg, projecting through the cervix, which constricts the tumour slightly. The diameter of the tumour at the cervix is about one inch, lower down at its widest part about an inch and a quarter. The finger can be passed all round the tumour between it and the cervix, and seems to be in a cul-de-sac which just admits the finger tip. On bimanual examination the body of the uterus cannot be felt in its normal position.

There is nothing else of note in patient's condition, except a severe degree of anæmia with a soft hæmic murmur at base and apex of heart.

Progress and Treatment.—Patient was kept in bed and had no discharge from October 3rd to 8th. On the 8th, menstruation began and continued freely till the 12th. On the 13th, patient was chloroformed, and the diagnosis of inversion of the uterus was confirmed by recto-abdomino-vaginal examination. An attempt was made to reduce the inversion with the hand, aided by pressure with Aveling's repositor, but this failed.

On October 15th, Aveling's repositor was introduced and fixed. This was tolerated till the 17th, when patient said the discomfort of the instrument was unbearable, and it was therefore removed. The uterus was found still inverted.

October 25th.—Since the 17th, the vagina has been douched daily and plugged with iodoform gauze. There has been almost no discharge. The patient's general condition has improved. She feels much stronger and is not so anæmic as on admission.

On the afternoon of the 25th patient was chloroformed. She was then placed in the lithotomy position, the cervix laid hold of behind and in front with volsellæ, and the uterus thus pulled well down.

Dr Berry Hart then made an incision 1¼ inches long in the posterior fornix opening into the pouch of Douglas. Two fingers of the left hand were then introduced through this and passed down into the infundibulum uteri. No adhesions were found. With the fingers of the left hand fixing the uterus and stretching the constricting ring, an attempt was made to reduce the inversion by manipulating the body of the uterus with the right hand. After some manipulation this succeeded, and the uterus was restored to its normal position. A silk stitch was introduced to approximate the lips of the cervix and prevent any tendency to reinversion. The incision in the pouch of Douglas was then closed with three silk sutures, and the vagina plugged with iodoform gauze.

Convalescence was uninterrupted. The urine was drawn off till the 28th, and the vaginal plug changed daily. On the 29th, discharge, apparently menstrual, appeared and continued for three days. On the eighth day after the operation the stitches were removed.

The temperature never rose above 98·6° after the operation, and the pulse remained normal. On November 15th the patient was discharged well. There was a little tendency to menorrhagia, which may need curetting.

The diagnosis of this case presented little difficulty, and the causation need not be discussed, as we have only the patient's account.

As to treatment, there were three alternatives. First, gradual reposition with Aveling's repositor; second, replacement after posterior colpotomy with or without a vertical mesial incision through the posterior uterine wall, as Küstner has recommended; and thirdly, hysterectomy.

The second succeeded admirably, and is therefore a method worthy of additional trial.

Professor Simpson remarked that cases of chronic inversion of the uterus were so rare that not many of us had met with them. He remembered a case that resisted the prolonged application of the repositor, and where, after various expedients had failed to effect reposition, he had been obliged to have recourse to amputation of the inverted uterine body. The happy result of this operation carried out by Dr Hart in the case so well described by Dr Struthers, would certainly lead to its adoption in other cases of otherwise irreducible inversion of the uterus.

Dr Brewis and *Dr Fordyce* also spoke.

VII. A RETROSPECT OF A FIRST SERIES OF ONE HUNDRED AND TEN ABDOMINAL SECTIONS FOR PELVO-ABDOMINAL DISEASE.

By F. W. N. Haultain, M.D., F.R.C.P.Ed., Physician for Diseases of Women, Deaconess Hospital, Edinburgh.

From the recent rapid advance in abdominal surgery, by which interference with the peritoneum has been shorn of its terrors, abdominal operations are now performed so frequently that it is superfluous to describe in detail each individual case. To those, however, who have many opportunities of performing such operations, a small residue of cases remain which are of interest, both clinically and from a surgical standpoint. It is my intention, therefore, to direct your attention to a few such instances, which have in my comparatively small experience presented themselves.

In the first place, it may be well to tabulate in a general manner the conditions for which I have thus operated, and there-

after to consider specially those of interest, under their individual groups. I may further state that this table embraces my entire experience in this branch of gynæcological surgery.

Table of Operations.

Operation.			Total.	Mortality.
Ovariotomy	Simple pedunculated cysts	Unilateral	18	35	0
		Bilateral	3		
	Simple sessile cysts	Abdominal	3		
		Subperitoneal pelvic	4		
	Papillomata	Unilateral	1		
		Bilateral	2		
	Solid tumours	Fibroma	2		
		Oöphoroma	1		
	Dermoid		1		
Broad ligament cysts				2	0
Hysterectomy	Fibrocystic		2	3	0
	Simple fibromyoma		1		
Myomectomy				3	0
Mixed tumours				2	0
Extra-uterine pregnancy				5	0
Ventro-fixation	Retroflexion		2	5	0
	Procidentia uteri		3		
Porro Cæsarean				1	0
Suprapubic cystotomy				3	0
Exploratory				10	1
Removal of Appendages	Dysmenorrhœa			2	0
	For fixed delusion			1	0
	For fibromyomata			4	0
	Diseased ovaries			8	0
	Matted appendages			15	0
	Simple tubal disease	Hæmatosalpinx	3	11	1
		Hydrosalpinx	1		
		Pyosalpinx	6		
		Tubercle	1		
				110	2

Ovariotomy.—This operation was performed on women who varied in age from 21 to 81 years. The tumour in the latter case was a large intraligamentary cyst, which grew upwards between the layers of the mesocolon, and was thus encircled by the adherent colon. Through the difficulty in enucleating and separating the cyst, the operation was a very prolonged one (one and a quarter hours), yet in spite of the great age of the patient she made a rapid and thorough recovery.

The largest ovarian tumour I have removed weighed 83 lb. The patient herself on recovery weighed but 1 lb. more, which solved the previously doubtful question as to whether the patient had been removed from the tumour, or *vice versâ.*

Perhaps the most interesting case in this group was one in which there was a rudimentary uterus, not larger than the terminal phalanx of the little finger, and a total absence of Fallopian tubes. The cyst was intraligamentary, pelvic, and sessile. From the absence of the usual landmarks of the uterus and tubes, the enucleation was considerably complicated; the pedicle, if such it might be termed, having to be formed by the infundibulo-pelvic ligament.

I have been more than usually fortunate in meeting with three solid ovarian tumours. These from their rarity and histological peculiarities are full of interest.

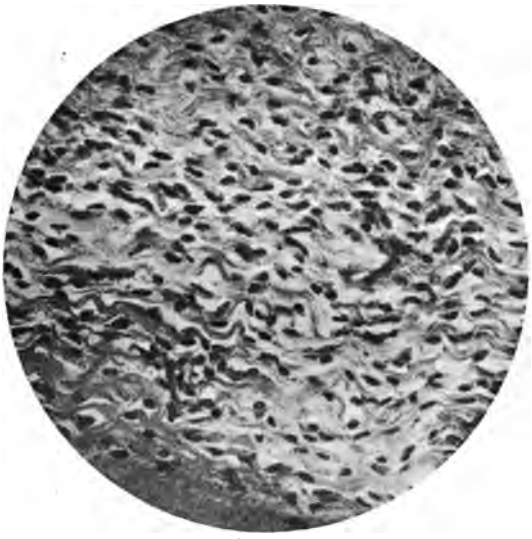


Fig. 1.—Solid ovarian tumour; white fibrous tissue.

One, a tumour weighing 6 lb., was found to be composed of typical white fibrous tissue (Fig. 1); another, weighing 1½ lb., presented all the characteristics of an exaggerated chronic ovaritis; while the third was entirely cellular throughout, and it is yet a matter of controversy whether it more closely simulates an encephaloid cancer or an alveolar sarcoma (Figs. 2 and 3).

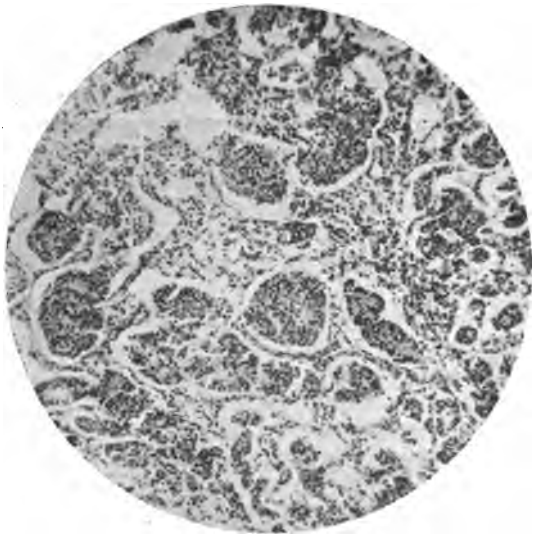


Fig. 2.—Solid ovarian tumour; oöphoroma (low-power).

The two first tumours were associated with rapidly developed and excessive ascites; with the third there was no trace of peritoneal effusion. This at first sight is contrary to what one would expect, as, from the apparently malignant nature of the cellular tumour, peritoneal effusion would seem a more natural consequence. These cellular tumours of the ovary, however, though apparently composed of embryonic cells, must

not necessarily be considered as malignant in character, as they do not tend to give rise to secondary metastases. I am inclined, therefore, to agree with Bland Sutton, that they cannot be designated as sarcomata or carcinomata, and am disposed to consider them as a special variety of new growth, which has ingeniously and aptly been described by him, oöphoromata.

The presence of ascitic fluid in association with solid tumours of the ovary is a matter of considerable interest, and is difficult to account for, especially when one considers that similar tumours of the uterus are not equally complicated. It would seem to me that the difference is to be found in the mode of circulation in the growths. The uterine fibroid is, as we know, entirely nourished through its capsule, in which the circulation is at all times easy, while the ovarian tumour is nourished entirely by means of vessels which enter within a limited area, and ramify throughout its structure. It will thus be evident that the blood return will, in dense fibrous growths, become gradually impeded and a serous intraperitoneal exudation predisposed to. This was well exemplified in the second of my cases, in which the periphery of the growth was found to be intensely congested, and the peritoneal cavity was at the same time filled with an abundant blood-stained effusion.

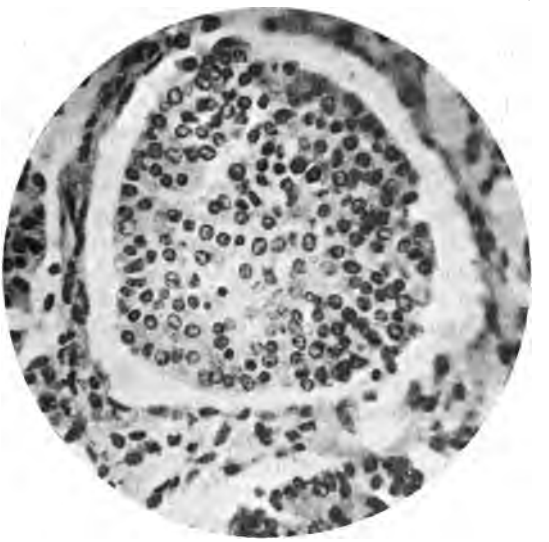


FIG. 3.—Solid ovarian tumour; oöphoroma (high-power).

That the circulation is difficult in fibrous ovarian tumours must be conceded, from the frequency with which degenerative cavities are found in their interior, and also from their extremely slow growth and comparatively small size; in fact, if it were not for the accompanying ascites, the presence of many of those operated upon would remain unknown.

The only other ovarian tumours which I have found associated with extensive peritoneal effusion have been fungating papillomata; in both instances the growths were bilateral, and since removal there has been no return of the ascites. As at the operation no

evidence could be found of infection of the peritoneum, one has no reason to expect its recurrence.

I may add that one of these patients had been tapped fourteen times in the course of the year previous to the operation; her condition being considered hopeless, and due to malignant abdominal disease. Although reduced to the utmost stages of weakness, I considered an exploratory incision advisable, and by this means I was enabled to remove the cause, with the most satisfactory result. I should like here to strongly impress the importance of exploratory abdominal incisions where diagnosis is not absolutely certain, and especially in cases of obscure ascitic collections.

Hysterectomy.—As the table shows, this was done twice for fibrocystic myomata; in one of these there was a distinct cyst, in the other the tumour was merely œdematous, which may be considered as the initial stage of cystic formation. In both, the tumours were interstitial and large, and were associated with profuse menorrhagia and metrorrhagia. The remaining hysterectomy I performed against my will, on a patient whose mind had been poisoned against the electrical treatment which I recommended. It was a simple interstitial fibromyoma, which I have little doubt would have yielded to the conservative method proposed. The operation in each case was similarly performed, and the stump treated intraperitoneally, after ligature of the uterine arteries. Myomectomy was undertaken in each case for pedunculated subserous fibroids; one of these I mistook for an ordinary ovarian cyst, and it was only after opening the abdomen that I became aware of the true condition.

Mixed Tumours.—In one of these I found and removed an ovarian tumour on the left side, and a simple broad ligament cyst on the right side. The other case was more complicated, and proved a veritable museum. On the right side there was a large ovarian cyst, and a medium-sized broad ligament cyst (so-called parovarian), on the left side there was a large broad ligament cyst, while in the uterus were numerous fibromyomata, one of which was the size of a cocoa-nut. As the fibroid was not markedly pedunculated, and having already removed both ovaries, I, with Dr Milne Murray's approbation, left it alone.

Extra-uterine Gestation.—In the five cases of this group the operation was performed after the symptoms of so-called rupture had been manifested. In four there had been profuse intraperitoneal hæmorrhage, which had given rise to the usual symptoms of profound anæmia, but in one of these only was there any evidence of rupture. The remaining three showed that the source of the bleeding was through the patent abdominal extremity of the tube, a feature so strongly and ably dwelt upon by Cullingworth. From a close examination of the specimens after removal, it seems to me that, in the majority of cases, separation of the ovum with necessary bleeding is the primary

factor in the so-called rupture. Should there be free exit to the blood, this is naturally taken advantage of; hence not only the bleeding from the abdominal ostium into the peritoneal cavity, but also the irregular uterine discharges with which ectopic pregnancy is so constantly associated at the time of the so-called rupture.

The fifth case was of more than ordinary interest, in so far as the tubal pregnancy occurred in a patient who had had an appendicitis seven years previously, and in whom the surrounding structures had evidently been left in a matted and adherent state,—so much so, indeed, that from the time of her appendicitis she had complained of a marked limp with the right leg. After having missed a period, the patient complained of a severe persistent pain in her side for three weeks, at which time she had a profuse uterine hæmorrhage and shed a complete decidual cast, which was thought to be an ordinary miscarriage. As thereafter the pain increased rather than lessened in severity, I was asked by Surgeon-Captain Watson to see her, and recommended immediate operation. On opening the abdomen, the intestines presented an intensely congested appearance; those in close continuity with the swollen and adherent right uterine appendages were of a purple black colour, themselves closely simulating a gravid tube, from which indeed Dr Murray and I had considerable difficulty in distinguishing them. After careful separation of the intestines, the gravid tube was found embedded in the pelvis; this I ligatured at both ends and excised, and subsequently stitched the two cut edges of the broad ligament over the site from which the mass had been enucleated. After recovery from the operation, the patient was surprised to find that the limp from which she had previously suffered had entirely disappeared.

Ventrofixation.—This operation I have found eminently satisfactory. It was performed twice for enlarged congested and fixed retroflexed uteri, which gave rise to marked symptoms, and in which douching and plugging had been futile in so softening the adhesions as to allow of reposition by ordinary methods.

Out of three cases of procedentia for which it was undertaken it has alone been absolutely successful in two, while in the third a secondary colporrhaphy had to be performed to rectify a most pronounced rectocele which remained.

The method of fixation I have adopted and can thoroughly recommend, is by stripping the parietal peritoneum off the edges of the abdominal wound, and thus apposing and fixing the fundus to the extraperitoneal tissues by means of silkworm gut sutures, which include the skin and recti muscles as well as penetrate the anterior uterine wall. So far, none of my cases have subsequently become pregnant, but from the mass of statistics published, where such has subsequently obtained, I do not anticipate more than a thirty to one chance that labour will in any way be unduly complicated.

Porro Cæsarean.—This operation I performed in a country cottage in Perthshire in the middle of the night. The patient was a dwarf, 3 ft. 11 in. in height. When I first saw her she was in the second stage of labour; the uterine contractions were extremely violent, and uncontrolled by deep chloroform anæsthesia, while retraction of the uterus was excessive, with a corresponding alarming thinning of the lower uterine segment. The conjugata vera was below 2 in. As I feared that rupture of the uterus might at any time occur, I recommended immediate operation, even though our armamentarium was incomplete and the surroundings by no means reassuring as regards asepsis. With the co-operation of Dr R. Stirling, the operation was easily and rapidly performed by the Porro-Müller method; the pedicle was treated extraperitoneally and secured by the elastic-tube method, so ingeniously devised by Lawson Tait. The patient recovered without a hitch, and has now a son, who, though but 6½ years old, is commencing to rival his mother in stature.

Suprapubic Cystotomy.—This was undertaken in each instance for new growths in the bladder, all of which were papillomatous and freely hæmorrhagic. In none has there been a reappearance of the bleeding, although it is now more than a year since the last patient was operated on. The age of the patients was 17, 50, and 52 years respectively. The thoroughness and ease with which one can remove these tumours by the suprapubic method as compared with the route by vaginal incision or urethral dilatation, justifies its selection; and as it is well known the special tendency of these simple vesical papillomata is to become malignant, it seems dangerous to tinker with them by haphazard scraping through the dilated urethra. As regards post-operative drainage in these cases, I have tried both the suprapubic (through the wound) and the urethral. The latter is most agreeable and comfortable to the patient, and in the case in which it was adopted proved most efficient. A No. 20 soft rubber catheter was used.

Exploratory Incisions.—What exactly is included under the term exploratory incision is difficult, nay, impossible, to define. To the experienced abdominal surgeon the frequency of exploratory incisions increases; in other words, the oftener he opens the abdomen the more does he realise the difficulties of the exact diagnosis as regards its morbid contents, and his inability to give that absolutely correct decision which alone can satisfy his conscience. Having opened the abdomen, his opinion is verified or the reverse, and he proceeds to complete the operation by the removal of the previously doubtful quantity, and catalogues the operation under its special designation. The group of exploratory incisions, therefore, must be considered as a sort of 'toom' for operations in which removal of the disease is considered unjustifiable, or where there are no diseased structures to remove; at the same time it may be made to include a number

of operations which cannot be grouped under any other heading, as, for instance, freeing adherent healthy ovaries, etc., etc.

As is to be expected, therefore, my operations under this heading, though described as but ten, would have been much increased in number, if the literal translation of the term exploratory incision had been upheld.

Three times I opened the abdomen for ascites and found extensive secondary malignant infiltration of the peritoneum. Once the infiltration was tubercular, and was drained with gratifying result.

In one case I freed apparently healthy though adherent ovaries on account of pain, and once stitched prolapsed apparently healthy ovaries to the pelvic wall. In another instance I freed an adherent pedicle after a previous oöphorectomy, which was causing much pain and discomfort. This I may say is my entire record of conservative abdominal surgery. I as yet do not feel myself sufficiently competent to recognise, by a slight superficial inspection, ovarian disease of such a limited nature as to warrant me in resecting the morbid position from the organ. Possibly a great future may be expected on these lines, but much yet remains to be explained as regards ovarian pathology, before one can hope to justify its ready performance.

Another case of some interest in this group was an absolutely adherent ovarian cyst, which was so intimately fixed to the anterior abdominal wall that I could not separate it. The patient had been seen some years previously by a very eminent ovariotomist, who then refused to operate, but as the tumour was now giving rise to urgent symptoms in spite of frequently repeated tappings, I decided to attempt its removal. My ambitious endeavours being futile, I made a large incision through the cyst wall, introduced my hand, broke up numerous loculi, and evacuated the contents. I then washed out the cavity with a weak solution of iodine, and drained. For three months the cavity was washed and drained before it became obliterated. The patient is now, however, perfectly recovered, though it is more than nine years since the operation was performed.

This was my first attempt at, and is my only unfinished, ovariotomy; had I been more experienced, doubtless I would have made more energetic attempts towards the complete removal of the tumour, but certainly with no better ultimate result, probably infinitely worse.

In this group I have unfortunately to record one of my fatalities, perhaps one of the simplest operations I have performed. It was undertaken for the removal of a hard swelling situated behind the uterus, which was giving rise to pressure symptoms. The tumour proved to be a subserous cervical fibroid, which from its attachments I considered would be more easily removed through the vagina, and I therefore closed the abdomen with the intention

of subsequently operating by that route. The patient, however, developed acute septic peritonitis, and died on the third day.

Removal of Appendages.—This operation was undertaken, as can be seen from the table, for a variety of pathological conditions, many of which are of interest.

Though loath to undertake so radical a case for dysmenorrhœa, it appeared to me absolutely necessary to perform it on two young women, in whom all other methods of treatment had failed, and who could not from their social position afford to lie up several days in each month. I may say both are now in active service, and have never regretted the means which were employed for their restoration to health and usefulness.

I also removed the appendages from a lunatic in an asylum in England, at the desire of the medical superintendent, to try and cure a monthly mental aberration (that she was harbouring a man inside her); the result at first gave prospects of success, but unfortunately the unwelcome lodger returned after a few months' holiday.

Three of the cases in which I have removed the appendages for bleeding fibromyomata have enjoyed absolute health since the operation; the other continues to menstruate as before, with great pain and in excessive quantity.

As will be noted, I have had a seemingly large number of removals of simple diseased ovaries. Two of these proved to be hæmatomata; in one, the opposite ovary seeming healthy, I left it. The remaining cases were operated upon for chronic ovaritis, interstitial and follicular. The ultimate result as regards these and the subsequent group of matted appendages have been to me sufficiently satisfactory to warrant the procedure. In quite 60 per cent. the previous pain and uselessness has been entirely removed, in 30 per cent. a marked improvement has been apparent, but the remainder, I am sorry to say, have remained *in statu quo ante.* In all these instances the patients had previously undergone a prolonged course of treatment without avail. It should also be noted that in many cases the beneficial effects of the operation were not apparent till many months after its performance.

There is no class of case so anxious to the conscientious surgeon. By thus operating he exposes the patient to considerable risk, simply to alleviate pain, which is an uncertain quantity. Her life, though miserable to herself, may be of the utmost value to her friends, children and others, while the disease she suffers from cannot be said to be dangerous. Under no circumstances, therefore, do I urge the operation, but merely suggest it after anxious deliberation, as a probable means of cure, and explain the risks and possible attendant drawbacks to herself and friends, more from the seamy than the rosy aspect. Within the last decade there has been an exaggerated swing of the pendulum in the opposite direction, from the reckless frequency with which this operation was performed; to this I am no

partisan. There is a happy medium; the operation is one of great value, and to it I am sure many women owe much gratitude and thanks.

The cases in which removal of the appendages has been undertaken for simple tubal disease offer two instances of outstanding interest. One a hæmatosalpinx, in which the patient, though suffering from enlarged and distended tubes, had never menstruated, though at the same time she was incapacitated from work by severe monthly pain. The uterus measured 1 in. by the sound.

The other was a case of apparently primary tubercle of the Fallopian tubes developing in an elderly spinster of 54, and giving rise to secondary ascites. The operation was performed to ascertain the probable cause of the peritoneal effusion, which had baffled many physicians to account for. That the disease was primarily in the tubes I am disposed to think, from the history of the case, as the patient dated the commencement of the illness from a free vaginal discharge, which suddenly appeared about five months before the abdominal distension was complained of.

In this group my other fatality is to be found. It occurred as the result of the removal of extremely adherent pus tubes, where, at the time of the operation, a small amount of pus escaped into the peritoneal cavity. Although free irrigation was employed, it failed to prevent infection of the peritoneum; the patient never seemed to rally, and died with acute septic symptoms early on the third day.

Technique of Operations.—In the technique of the operations described I have nothing original to suggest; my aim has been entirely directed to three primary essentials—(1) Asepsis, (2) control of bleeding, and (3) precaution against injury to the hollow viscera. As regards the question of antisepsis *versus* asepsis in abdominal surgery, I am at a loss to give a definite opinion, as I have employed, and continue to employ, both methods as circumstances demand, with equally satisfactory results. In my hospital cases, where asepsis can be carried out in a thorough and efficient manner, I entirely confine myself to aseptic methods. In private, however, where the surroundings are necessarily questionable, I have always adopted antiseptic measures. These consist in the free use of 1 in 40 carbolic acid for sponges, instruments, and hands. As far as my experience shows, there is nothing to be said in favour of one method as against the other. In every instance, however, I poultice the skin of the abdomen for forty-eight hours before operation with a compress of 1 in 3000 corrosive. By this means I have certainly lessened, though not entirely removed, the presence of stitch-hole abscesses.

The control of hæmorrhage is undoubtedly one of the most important factors in successful abdominal surgery. By this I do not simply mean the securing of all bleeding points before

the abdomen is closed, but more particularly the conservation of blood, or, in other words, the prevention of unnecessary blood loss during the operation. I feel convinced that many of the cases which die shortly after operation with symptoms of shock, so called, are the result of slight venous oozing, which has followed the loss of a large quantity of blood during the operation. The slight venous ooze is, indeed, the last straw, and is equivalent to the apparently trivial post-partum trickle, which accounts for so many deaths after placenta prævia. With this in view, therefore, I make a point, before proceeding to free adherent tumours from the surrounding structures, to attempt to cut off the circulation through the tumour, by ligaturing the main sources of blood supply. In ovarian and tubal cases this is, as a rule, easily accomplished by a stitch through the infundibulo-pelvic ligament which controls the ovarian artery, and another deep stitch through the broad ligament at the angle of the uterus and tube, by which the uterine supply to the ovary is cut off. Hæmorrhage into the cavity of a tapped cyst is also thus avoided. This is very apt to be concealed and overlooked, and must always be considered as a possible complication. For the same reason I never separate large adherent areas at one time, preferring rather to control the bleeding as I slowly proceed.

It will thus be evident that my object is not brilliancy and rapidity; these I consider unnecessary, and more of the nature of playing to the gallery. The benefits claimed for rapidity, if real, may be more than counterbalanced by a short, sharp hæmorrhage, while the dread fear of so-called shock from prolonged operations, as far as my experience goes, gives infinitely less anxiety than a severe blood loss. True shock after abdominal operations I consider a much over-rated danger. I cannot recall a single instance in my own practice which gave me a moment's anxiety, although in difficult cases the operations have at times lasted at least two hours. That shock is a possible cause of death, perhaps one must admit. Its rarity, however, is extreme. Doubtless it is a convenient term for filling up death certificates, impressing sorrowing relatives, and apparently soothing the operator's conscience. It is, however, so closely simulated by acute septic infection and excessive blood loss, that it can only be considered when, by post-mortem examination, these have been proved to be absent.

Where dense adhesions exist between tumours and the hollow viscera, I prefer to leave a portion of the cyst wall attached; this I thoroughly scrape, invaginate the edges, and stitch with a continuous suture.

With regard to the 'toilette' of the peritoneum, I am not nearly so energetic in sponging the cavity clean as I at first was. I believe the presence of aseptic blood is less harmful than the irritation of prolonged sponging. In fact, in one of my cases of

extra-uterine pregnancy, in which the patient was pulseless and almost moribund, I took advantage of some of the effused peritoneal blood as a restorative, by mixing with it *in situ* a pint of warm sterilised normal salt solution, before closing the abdomen. The result was most satisfactory, and I cannot help thinking that its ready absorption was advantageous to the patient.

When pus or other foreign fluids escape into the peritoneal cavity, I irrigate with 1 to 40 boroglyceride solution, which seems to be better borne by the delicate peritoneal endothelium than simple sterilised water, and it is at the same time antiseptic.

Drainage through the abdominal wound I now never employ, except I fear excessive hæmorrhage from venous oozing; here the tube if used only as an indicator of the presence of bleeding. Should drainage of the peritoneal cavity be necessary, I should be disposed now in every case to drain through the posterior fornix vaginæ, as it appears to me the drainage by this route must be more thorough, a contention which is strongly supported by the almost entire absence of septic peritonitis after vaginal hysterectomy. This method of drainage I had occasion to use in one case, after rupture of a pyosalpinx during removal. An ordinary gauze drain was used, and left in for thirty-six hours: the result was eminently satisfactory.

In suturing the abdominal wound I include all layers with silkworm gut stitches; in some cases I have omitted the peritoneum, dreading its infection should stitch-hole abscesses develop. Both methods seem equally satisfactory. I may say that as yet I have no case of ventral hernia, though my series of operations has extended over a period of ten years.

Post-operative treatment.—In our improved methods of the after-treatment of abdominal sections I fully believe lies the secret of the greatly diminishing mortality in these cases of recent years. I, even during my experience, have seen it almost entirely revolutionised. In my earlier cases I followed as implicitly as I could the starvation methods then adopted. These, however, my humane instincts recoiled from very soon, and led me to follow gradually an almost entirely opposite course. The visions of the torture which patients suffered from the total want of fluid for forty-eight hours after a prolonged operation, remains with me now as a nightmare, and savours more of the treatment of prisoners in a Chinese jail than patients in a British sickroom. No doubt it was adopted, as based on an ingenious physiological theory of peritoneal absorption which fortunately, as so often happens, has been found clinically to be entirely fallacious.

As in the technique of operations, so in the after-treatment, there are three essentials I aim at—(1) To preserve strength, (2) to promote comfort, and (3) to prevent intestinal paralysis.

As regards the first of these, I never omit the routine custom of a nutrient enema before the patient leaves the operating-table,

which is to be repeated every four to eight hours, according to the condition of the patient, should she be unable from chloroform sickness to take nourishment by the mouth. The enema I am in the habit of ordering is—whisky, 1 oz.; yolk of egg, ½ oz.; bovril ad 4 oz.

Should the stomach be able to retain fluid after four to six hours, small quantities of tea, coffee, or dilute meat juices can be given. Should, however, as is usual, chloroform sickness be present, enemata only are employed. In prolonged and excessive chloroform sickness and retching, a large drink of hot water is useful in washing out the stomach; and should vomiting still continue, I have found it frequently stopped by a teaspoonful of white of egg and whisky beaten up together, given at intervals. After twenty-four hours, should there be no inclination to sickness, tea, gruel, soups, and nutrient jellies should be frequently given in small quantities. Milk foods and aerated drinks I have found objectionable. On the third day the patient may partake of ordinary light diet. Should the pulse be at all feeble or quick, cardiac stimulants, preferably strophanthus, should be employed from the commencement. This is to be recommended as routine practice in patients over 50 years.

In the promotion of the patient's comfort our attention is most frequently directed to combating thirst and pain. Thirst I find best alleviated by large normal saline enemata (1 pint), and swabbing the gums, mouth, and lips with a weak solution of glycerine and water.

Pain in the wound is diminished by placing a large pillow below the patient's knees, to remove abdominal strain. For the severe pain in the back which always is present after removal of the appendages, and occasionally after ovariotomy, I never hesitate to give one dose of morphia (½ gr. suppository or ⅙ to ¼ gr. hypodermically). It frequently ensures a quiet and restful first night, which more than compensates for the minor ulterior effects it is supposed to cause. I may add I never repeat the dose.

I also invariably insist on the patient being turned on her side several times during the first forty-eight hours. This not only is the means of giving the patient relief from prolonged lying in the dorsal position, but I feel is of the utmost value in promoting free peritoneal drainage by absorption. By so doing any pool of intraperitoneal fluid which must necessarily, in the dorsal position, lie stagnant in the retro-uterine pouch, is disseminated over the entire peritoneal surface, where, if aseptic, it is readily absorbed, and if it contain organisms they are subjected to a ready and powerful phagocytic action. Much may be gained by attention to details in promoting comfort. Ease and contentment are valuable agents in fostering recuperative power.

Flatulent distension of the intestines is extremely common, and must be treated early to avoid anxiety. It may usually be

avoided by an aperient on the third day, but, should it develop, strenuous endeavours to overcome it must be made. The most ready methods of doing so, I have found to be large turpentine enemata, introduced far up into the bowel, as high as the vaginal nozzle of a Higginson syringe will reach, the nozzle being kept in the rectum till the enema is returned. After this, with the nozzle still *in situ*, gentle massage along the colon will usually be found effective; if fruitless, nothing remains but a free purge with calomel (5 grs.) and saline.

Accidental complications.—Before concluding, it may be interesting to relate some rare accidental complications which I have met with. In one instance I had a severe secondary hæmorrhage from the abdominal wound, which nearly resulted fatally. In another, after shifting the patient from one room to another on the seventh day, a pulmonary embolism resulted, probably from the detachment of a small thrombus in the pedicle.

A case of double suppurative parotitis after ovariotomy also may be mentioned, interesting in so far as the night attendant on the patient had recovered from mumps only a fortnight previously. As is well known, parotitis is an occasional complication of ovariotomy, and the case in point may be looked upon merely as a coincidence; on the other hand, it is possible that there may be a special susceptibility to mumps infection after such operations.

The last complication I shall mention is one of such interest, that I may claim your forbearance in relating it more fully. It arose through my carelessness in leaving a pair of catch forceps in the peritoneal cavity.

The case was a double ovariotomy, in which, from the solid nature of the tumour, a large abdominal incision was necessary. There were no adhesions or other complications; the operation, in fact, was as simple as could possibly be.

On returning my instruments to my private hospital, my matron informed me the day afterwards that a pair of forceps were missing. Knowing I had no occasion to use forceps in the peritoneal cavity, I naturally did not consider they were there, and surmised they had been lost in transit. The patient, during the first week after the operation, however, did not appear to be progressing so well as usual, and complained considerably of abdominal discomfort and backache. This continued, and on the sixteenth day a localised abdominal distension appeared. The association of the lost forceps and the abdominal swelling now dawned on me and haunted my thoughts. I was loath, however, to believe in such a probability, and waited for another week. By this time, however, it was evident the patient (not to say myself) was rapidly losing ground, and becoming emaciated and hectic, while her abdomen was becoming irregularly distended. I therefore resolved to sift the matter and make an exploratory incision This I did on the twenty-third day, with the co-opera-

tion of Dr Alexis Thomson, and to my horror found the forceps embedded in plastic effusion. With the utmost difficulty they were enucleated from their bed, and the resulting vascular cavity stuffed with gauze. After this, fortunately, the patient made a slow but good recovery. From a practical point of view, the case is of interest in showing how easily and apparently unaccountably such an accident may happen, and is a severe object-lesson of the scrupulous care required in attending to the details of abdominal surgery. From a scientific point of view, it is interesting in showing, as the chart demonstrates, how in such a case, with a practically normal temperature and pulse, the most serious active mischief may be present in the peritoneal cavity (see Chart Fig. 4), which in this instance was apparently rapidly progressing to a fatal issue.

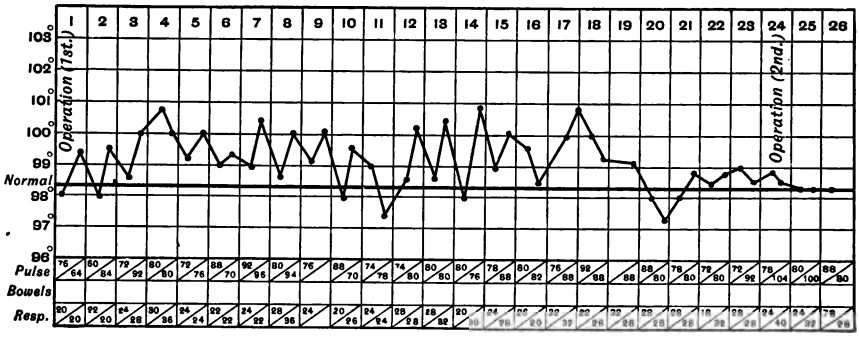


FIG. 4.

As the table shows, I have had two deaths as the result of my operations, both of which were from acute septic peritonitis. In one of these the reason is not difficult to seek, in so far as it occurred after soiling of the peritoneum with pus from a ruptured pyosalpinx. In the other, however, some faulty procedure must lay the blame on myself. Occurring as it did after one of the very simplest of my cases, it stands prominently out as a warning of the risk and danger (of which I am keenly cognisant) that are associated with even the most trivial interference with the peritoneum.

I cannot close without expressing that any success I have obtained in my cases has been mainly due to the many opportunities kindly afforded me by Dr Halliday Croom, whose methods I had the honour for years to watch, and thus became thoroughly conversant with; and further to Dr Milne Murray, whose co-operation with me in my earlier cases and many of my subsequent severer operations, has given me that much-needed support, which is so essential in the performance of anxious operations when previous experience is more or less wanting.

Professor Simpson wished to join with the president in expressing the pleasure with which he had listened to Dr Haultain's very interesting communication, and thought the Society was to be congratulated on the circumstance that one of its Fellows had been able to present such a brilliant record. As they had attended to the history of the cases Dr Haultain had recorded, and the methods he had adopted in the whole management of his individual patients, they were not surprised at his eminent success, and knowing, as they all did, the talent as well as the skill and care which he had brought to his work, they felt that his success was well deserved. With regard to gestation and labour in a ventro-fixed uterus, he (Prof. S.) might mention that he had lately delivered a lady of a boy who had given birth previously to two girls, the youngest of whom was ten years of age. She had become the subject of a troublesome retroflexion of the uterus, which he had fell warrant in curing by ventro-fixation exactly a year before the birth of her boy. There was nothing abnormal in the labour except that there was delay in the separation of the placenter which he had removed by passing the hand into the uterus. Her recovery was perfectly normal. He (Prof. S.) believed that some of the difficulties of labour with the ventro-fixed uterus was due to the uterus having been stitched to the abdominal wall too high up towards the fundus.

The President, Drs Hart, Brewis, Milne Murray, Haig Ferguson, and Fordyce also spoke, and Dr Haultain replied.

VIII. REPEATED ECTOPIC PREGNANCY IN THE SAME PATIENT, WITH ACCOUNT OF A CASE WHERE TWO GESTATION SACS (ONE A LITHOPÆDION) WERE SUCCESSFULLY REMOVED FROM EITHER SIDE AT ONE OPERATION.

By James Haig Ferguson, M.D., F.R.C.P.Ed., M.R.C.S.Eng., Lecturer on Midwifery and Diseases of Women, Medical School; Examiner in Midwifery, University of Edinburgh; Physician for Diseases of Women, Leith Hospital.

Cases of extra-uterine pregnancy occurring on both sides of the same patient, either at the same time or at intervals, are sufficiently rare to merit special note being taken of them; and the case which I am about to record has this unique characteristic, that it is the first, so far as I can find, which has been actually demonstrated in Scotland, though Reid of Glasgow described a case last year, which in all likelihood belongs to the same category.

Olshausen was the first to give statistical observations regarding extra-uterine pregnancy occurring twice in the same patient in connection with a case of his own, and Abel thinks such cases much more common than is generally thought, and that we are only just beginning to observe them. There has lately been a considerable number of cases reported of

repeated tubal pregnancy in the same woman, but laparotomy performed twice on the same case is mentioned by only fourteen operators, Abel, Veit, Herman, Olshausen, Ross, Beck, Bennington, Harrington, Frankenthal, Brosin, Kokmann, Schoolfield, Falk, and Zangemeister, the latter recording two cases of this nature. Kokmann's is the only case where a normal pregnancy and delivery occurred between the two laparotomies. In Lawson Tait's case a normal pregnancy and labour occurred between the two extra-uterine gestations, but there was no second operation. As regards the frequency of the condition few statistics are available. Puech, in 1879, gives eight cases of repeated extra-uterine gestation out of 180 cases of extra-uterine pregnancy, and Dührssen records two cases from a total of thirty-seven, making an average for Puech of 4·4 per cent. of repeated tubal pregnancies, and for Dührssen of 5·4 per cent. in their series of cases of ectopic gestation. From these figures we would therefore deduce that in every hundred cases of extra-uterine pregnancy we should expect to find practically five examples of both tubes being involved at the same time, or of having been involved at intervals more or less prolonged. According to Zangemeister, the shortest interval between two repeated tubal pregnancies is six weeks, and the longest is five years. The case of the six weeks' interval was a case of Zangemeister's, and the example of five years' interval is Kokmann's. In Coe's case, however, there was an interval of twelve years between two tubal pregnancies on the same side.

Cases are recorded where ova were found either in the same tube at different places, or an ovum in each tube at the same time (See Rowan, *Austral. Med. Journ.*, 1890, p. 265; and Boehmer, 'Observat. Anatom. Rar.,' pars 2). The references I append include only those cases where ectopic pregnancy has occurred on both sides, or, as in Taylor's and Coe's cases twice on one side. The cases of twin tubal pregnancy, and the examples of combined extra-uterine and uterine pregnancy are not referred to here. Some of the cases recorded as repeated extra-uterine pregnancies are certainly doubtful, as, for instance, one of Herman's cases and Van Henkelom's case. Haydon's well-known case is apparently one of pregnancy in a uterus with rudimentary second horn on the second occasion, the first being a tubal pregnancy.

The following is the account of my own case:—

Mrs M. is an apparently healthy woman, æt. 29. Her first child was born in May 1891. It was a cross-birth, and the child, though born alive, only survived one hour. A second child was born at the seventh month in February 1892, which likewise only survived one hour. After this her menstruation was quite regular till January 1894, when she missed her period. After four months' amenorrhœa she was suddenly seized with violent abdominal pain, chiefly on the right side, and shivering. At that

time she resided in Ireland. She can give no history of discharge of bloodclot or membrane of any kind on that occasion. For these symptoms she was treated with poultices and hot applications by her medical attendant, and she was confined to bed for many weeks, and felt very ill for the first week or two. After her recovery the periods returned as usual and she was quite regular till February 1898, when she again missed two periods. An interval of about four years thus elapsed since the previous amenorrhœa. I am indebted to Dr D. J. Graham for these notes of the patient's history.

I saw the patient first on 11th April 1898; she was then suffering from pelvic pain and retention of urine. After the bladder was catheterised there was found on examination a fluctuating tender swelling about the size of a goose egg on the left side of the uterus, the uterus itself being enlarged and pushed to the right side. To the right and slightly above the level of the fundus uteri a fairly hard somewhat irregular body was felt which gave the impression of being ovarian in its origin, or possibly a pedunculated fibroid. A small shred of membrane was passed per vaginam after the examination, and on microscopical examination it proved to be a piece of typical decidua. The case was clearly a left tubal pregnancy, about the third month of gestation: the size of the sac corresponding pretty closely to the period of amenorrhœa which had occurred. I thought it probable that there had been some hæmorrhage into the mesometrium, partly from the fact of the sudden pain and sudden attack of retention of urine, which were the cause of my being sent for, and partly from the physical signs on examination. The retention of urine did not last for more than a couple of days. On the 19th April (eight days after first seeing the patient), I performed abdominal section as the patient's symptoms called for active interference, and the tumour was steadily increasing in size. On the left side was found the characteristic appearance of a tubal pregnancy. Just as I touched it (without the least rough handling) the sac ruptured posteriorly, and bloodclot and fresh blood escaped into the peritoneal cavity. At the time it looked as if the rupture had taken place not through the tube, but through the broad ligament, but more careful examination shows that the rupture took place through the tube wall close to its attachment to the broad ligament (see Plate). The sac was comparatively easily removed along with the corresponding ovary which is closely attached to it, and the hæmorrhage was soon controlled. There were bloodclots in the cavity of the broad ligament. On the right side an irregular nodulated swelling was discovered, attached by a narrow pedicle (close to the right cornu of the uterus) to a very much dilated and tortuous tube, which was adherent to the fundus uteri. The tube closely resembled small intestine in appearance and size, and was filled with serum, a well-marked hydrosalpinx. This sac proved to be

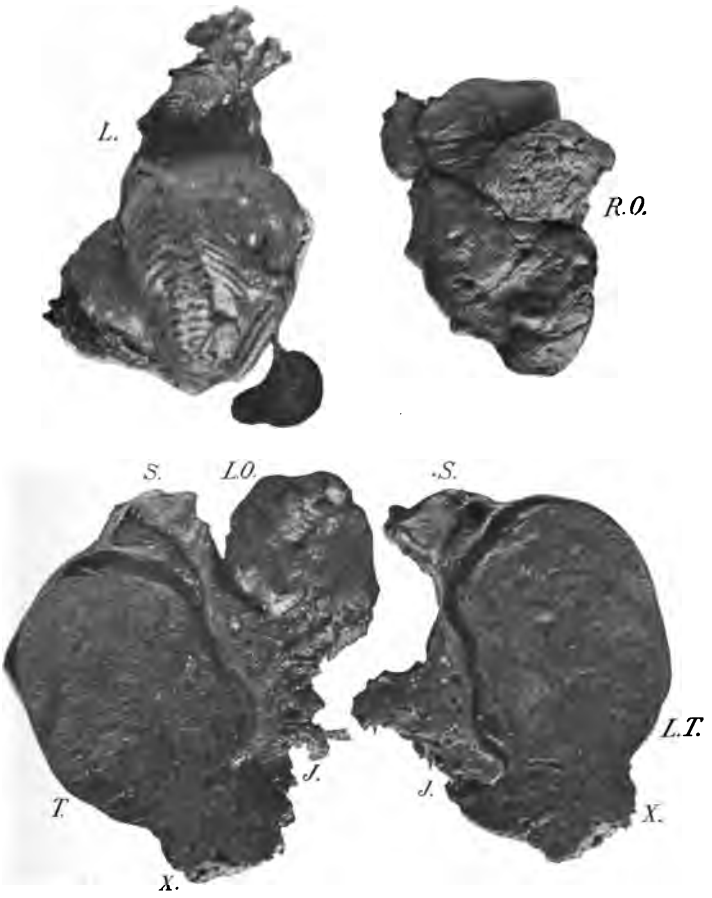
a lithopædion (see Plate), and was filled with the bones of a four months' fœtus. The lithopædion sac lay in the peritoneal cavity, attached to the tube by a narrow fibrous pedicle, and looked as if it had been originally extruded through the peritoneal covering of the tube. The right ovary was cystic and was removed at the same time. The patient has made an uneventful recovery.

It is interesting in this case to see that the presence of the lithopædion on the right side corresponds exactly to the patient's history of four months' amenorrhœa in 1894, ending with the symptoms of pelvic inflammation on the right side, the result of a ruptured tubal pregnancy.

On referring to the illustration (Plate 1), the appearance of the specimens is well seen. The lower figures represent a vertical section of the left tubal gestation, the two halves being folded back and laid side by side to show the contents of the sac. The thinned out tube wall is well shown, and at one part there is a distinct patch of sclerosis. Effused blood is seen in the meso-salpinx, showing that rupture had occurred there to a limited extent. The point of rupture of the sac partially and mainly through the tube wall into the peritoneal cavity, and partially into the broad ligament can be seen. Placental tissue is well marked in the section, but the fœtus is lying to one or other side and is not seen. The illustration shows the specimens much shrunken by the action of the spirit. The action of the spirit, however, has been to render more distinct the fœtal bones through the sac wall of the lithopædion, and by causing the sac contents of the left tubal gestation to shrink in somewhat, the attenuation of the wall of the tube is better seen.

It is of interest to notice that rupture of the tube must have occurred first into the broad ligament. There was, however, no great separation of the layers of the mesometrium, and clearly there must have been some resistance to effusion occurring to any great extent in that direction. This is to be accounted for, I think, by the fact that there is evidence of old inflammatory mischief in the broad ligament, which prevented any great separation and distention. The result was that very little relief of tension occurred in the tube after the first rupture, and this accounted for the tube rupturing into the abdomen when I first touched it. The condition at the operation to all intents and purposes resembled an unruptured tube. The attempt at the formation of a broad ligament (extra-peritoneal) gestation failed, owing to the inflammatory exudation, and rupture eventually occurred into the abdominal cavity.

In the diagram, which represents the tube with its peritoneal covering, the arrow (*a*) shows the direction of the first rupture between the layers of the broad ligament; the arrow (*b*) represents the direction of the second rupture which occurred posteriorly into



From a Photograph (natural size) of a right lithopædion and a left tubal pregnancy removed from the same patient at one operation. Specimens much shrunk from action of spirit.

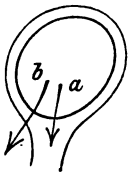
UPPER FIGURES.—*L.* Lithopædion sac from right side, showing spinal column and ribs of 4 months' fœtus with pedunculated tubal cyst attached. *R.O.* Right ovary (cystic), and part of dilated tube.

LOWER FIGURES.—*L.T.* and *T.* Vertical section through tubal gestation sac on left side laid open and showing shrunken contents. Placental tissue is well seen, but the fœtus is not in the section. Note (1) great thinning of wall of tube except at sclerosed portions *S.S.*; (2) effused blood in mesosalpinx; (3) point of rupture of sac between the points *X.* and *J.*, partially through tube wall into peritoneal cavity, and partially into the broad ligament. The thin tube wall terminates at *X.* in the figures, and between *X.* and *J.* lies the partly extruded portion of the sac contents. *L.O.* left ovary.

To face p. 40.

the abdominal cavity, and which communicated with the cavity of the broad ligament as well.

There can be no doubt but that extra-uterine pregnancy is due to a great variety of possible causes, the chief of which is some mechanical obstruction most likely from peri-salpingitic or peri-metric adhesions causing obstruction of the tube by the formation of peritoneal bands (Virchow, Spiegelberg, Schrœder, Martin, Scanzoni, Webster, Rumpf, Falk.) In this case there can be no question as to the existence of old standing peri-salpingites and cellulitis especially on the left side. The inflammatory thickening of part of the tube wall and of the broad ligament is not recent but of old standing.



This leads one to consider, in view of the possible recurrence of extra-uterine pregnancy in the same patient, what should be done with regard to the other tube and ovary when one operates for a single ectopic gestation. Clearly, if there is the least sign of disease they should be removed also. But this, unfortunately, is not always possible to recognise as changes in the mucous membrane of the tube or obstructions in its lumen may exist without any external evidence of their presence. There seems to be little doubt but that the proper course in cases of operation for extra-uterine pregnancy is to remove the appendage of the opposite side as well when this can be safely done. In all such cases the operator should get the *written* consent of the patient or her husband, giving him full discretionary power as regards the removal of the other appendage even should there be no macroscopic evidence of disease; should this be refused the responsibility rests with them. Reed [*New York Medical Journal*, June 6th, 1891] advises removal of the other ovary and tube in cases of ectopic gestation 'owing to the frequency of recurrence, for the desquamative salpingitis which is the cause of the extra-uterine gestation in one, without doubt exists in both tubes.'

This case further enables us to draw an interesting comparison in the same patient between an ectopic gestation left to Nature (and where recovery has fortunately taken place), and one treated by prompt surgical interference. The patient apparently just managed to struggle through on the first occasion, and she had a most tedious and painful convalescence. On the second occasion she escaped all this, made a rapid and painless recovery, and no dangerous symptom manifested itself at any time after the operation.

Lastly, as regards the method of operation, it is very seldom that the vaginal method would be indicated. The main indications for vaginal operation are (1) where suppuration has occurred in the sac, and (2) in some cases of a second recurrence of ectopic gestation, where possibly extensive adhesions exist above, and

when the tumour is mainly pelvic, and easily accessible per vaginam. Even in the latter class of cases, however, cœliotomy would be the preferable operation unless under very exceptional circumstances.

In a mesometric gestation, that is, when the tube bursts between the layers of the broad ligament, operative interference is rarely necessary, as the hæmorrhage usually ceases and the blood and products of conception gradually become absorbed. In this case, however, in spite of the mesometric rupture the sac continued to grow, and the ovum was continuing to develop, not in the broad ligament, but in the tube, for the reasons already explained. It was well, therefore, for the patient, that she underwent an operation before further rupture took place, this time into the abdominal cavity, which, as the event showed, would certainly have occurred at no distant date.

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MEETING III.—JANUARY 11, 1899.

DR J. HALLIDAY CROOM, *President in the Chair.*

I. R. J. Johnston, M.B., C.M., 1 Buccleuch Place, Edinburgh, was duly elected an Ordinary Fellow of the Society.

II. *Dr R. Milne Murray* showed—(*a*) An IMPROVED BOLT OF AXIS-TRACTION FORCEPS; (*b*) a FŒTUS AND PLACENTA showing remarkable twisting of the umbilical cord.

III. *Professor A. R. Simpson* showed—(*a*) FŒTAL BONES FROM A CASE OF EXTRA-UTERINE GESTATION; (*b*) ABORTION FROM A CASE OF PNEUMONIA; (*c*) A SPECIMEN OF HÆMATOSALPINX; (*d*) SPECIMEN FROM A CASE OF SALPINGO-OVARITIS; and (*e*) THE EXTERNAL GENITALS REMOVED FOR PRURITUS VULVÆ.

IV. *Dr W. Fordyce* showed a HYDROCEPHALIC FŒTUS.

V. *Dr J. W. Ballantyne* exhibited—(*a.*) A CERVICAL FIBROID which he had removed about two years ago from a patient 52 years of age who was suffering from tremendous metrorrhagia. She lived in Forfarshire, and he was hastily summoned, and he went up knowing only that there was a tumour in the vagina, with a distinct pedicle. He found the patient in a very exhausted condition, with extreme anæmia, valvular heart mischief, and dyspnœa. She had suffered for several months from severe vaginal hæmorrhage, and six weeks previously had had quite a flooding. Then for the first time she allowed her medical attendant to examine her. She was a married woman, but had never been pregnant. It was found that the vagina was entirely blocked by a fibroid pedunculated, as the medical attendant took it to be. The patient at first refused to submit to operation, but at last, finding that the bleeding continued, she consented. A nurse was got from Perth, and he (Dr Ballantyne) was sent for. On making an examination he found the lower part of the abdomen quite blocked by multiple fibroid growths, and in the vagina was an ovoid mass filling it entirely. The patient was with difficulty anæsthetised with the A. C. E. mixture, and he then found that what had been regarded as the pedicle of the vaginal tumour was really the cervix itself. Further, the uterus could not be pulled down at all on account of the blocking at the pelvic brim. As far as could be made out the

fibroid was quite continuous with the anterior lip of the cervix. In the hope that possibly the vaginal fibroid might be the immediate source of the hæmorrhage, he resolved to try to remove it piecemeal. It was accordingly taken away in about half a dozen bits. There was a good deal of bleeding during the procedure, but this was kept in check by douching with very hot water. He left as much tissue as represented a normal anterior cervical lip. Her condition while under the anæsthetic was rather alarming, but she came out all right. For a few days there was a good deal of somewhat offensive discharge, but the temperature never rose, and there was no return of the bleeding. She was able to get up in ten days. That was more than two years ago, and her medical man (Dr Mill, of Kirriemuir), writing last week, reported her as wonderfully strong and quite free from any symptoms of uterine mischief.

(*b.*) Three photographs of a SIAMESE CHILD WITH A LARGE CONGENITAL GROWTH ON THE FACE which he had got from Dr Nightingale. The child, a boy, was 7 years old, and was living in Bangkok. His mother was well formed and has had three other children, none of whom were deformed. The tumour covered nearly the whole of the right side of the face. It felt soft and doughy, with the exception of one spot on the left side which felt as if it contained fluid. It was comparatively small at birth, and grew with the general growth of the boy. It always hung over the right side but could be moved to the left side slightly when the right eye was seen deeply set in the head, and resembling (Dr Nightingale said) to a remarkable degree that of an elephant. The base of the tumour extended from the forehead to nearly the end of the nose, and the nostrils were much flattened, especially the right. The child suffered no inconvenience from it, was very intelligent; about two years ago he went through a mild attack of small-pox. Dr Ballantyne pointed out the close resemblance between this Siamese boy and the case reported by Dr J. Rutherford Morison, and communicated by him to the Society in June 1896. He thought it was probable that the tumour in both cases was a teratoma.

(*c.*) AN ABORTION-SAC CONTAINING A PARTIALLY ORGANISED BLOOD CLOT which had been given him for examination by Dr J. Stevens. It came from a woman, 41 years of age, who had eight years previously had a normal labour. The child is now alive and well. She was the subject of gastric catarrh, advanced heart disease (double aortic), and chronic phthisis. Probably the cardiac condition was the cause of the abortion which took place after two periods had been missed. The abortion-sac measured 3½ cms. by 2½ cms., being a little larger than a pigeon's egg; it had a markedly firm consistence due to the blood-coagulum in its interior, and had, when fresh, a purple red colour. The decidual membranes (the vera at any rate) were attached to it only at one

spot which coincided probably with the position of the decidua serotina. A microscopic section had been made which showed that the hæmorrhage had taken place between the decidua reflexa and the chorion. The cavity of the amnion was in this way pressed to one side and flattened out. Little or no liquor amnii was present and the embryo was not visible, but no special attempt had been made to find it, as it had been wished to preserve the sac for exhibition. The specimen might be called a blood-mole, or hæmorrhagic abortion-sac. The patient recovered well from the abortion and is now menstruating again normally.

(*d.*) SECUNDINES FROM A CASE OF CENTRAL PLACENTA PRÆVIA to which he had been called on the occasion of the last meeting of the Society. The patient, a woman 22 years of age, had already had three normal labours. The present pregnancy had reached the seventh month without any unusual symptom when violent hæmorrhage set in. The students in attendance on the case, recognising the prævial nature of the placental insertion, had sent for him. There had been profuse bleeding, and it was found on the vaginal examination that there was central insertion of the placenta. At any rate, he could feel no placental margin anywhere within reach of the finger. The mother had not felt life for ten days or a fortnight. The hand was driven right through the placenta, and a dead fœtus extracted by version. On the second day of the puerperium the maternal temperature went up to 104·5; but intra-uterine douching brought it down, and thereafter the woman made an excellent recovery. The placenta was that of a seventh month pregnancy, measuring from 5 to 6 inches in diameter; the cord was inserted very excentrically; and the after-birth had evidently been situated almost exactly centrally over the internal os. The membranes were much torn during removal. The case strengthened him in the belief[1] that in placenta prævia bleeding at the seventh month usually indicates the central type; at the eighth month, the lateral; and at the ninth, the marginal variety.

(*e.*) UTERINE CONTENTS FROM A CASE OF MISSED ABORTION which he had seen in consultation with Dr Peddie. The patient was a multiparous woman, and regarded herself as seven months pregnant; but she had felt no movements, and her abdomen was not at all distended, neither were there any of the reflex phenomena of pregnancy. The bimanual examination revealed a uterus about the size it usually has at the third month, the cervix was tightly closed, and the vagina showed neither the coloration nor the vascularity of gestation. When about three months pregnant the patient had had the threatening of a miscarriage, some pain and slight discharge, but these had passed off. As she was not suffering in any way, he advised waiting till the full term of preg-

[1] *Vide* 'Placenta Prævia: its dangers and treatment.'—*Internat. Clinics*, 8th series, vol i. p. 53, 1898.

nancy, or till symptoms arose justifying interference. He diagnosed the case as one of missed abortion. He first saw her on June 29, and on August 20 the uterine contents were expelled. There was no difficulty either at the time of their expulsion or after, and the patient's menstruation, which had been in abeyance, soon returned. The contents consisted of an elongated mass, measuring 6 cms. in length by 3 cms. in breadth. It was made up of the decidual membranes, which seemed hypertrophied, and the ovum. It seemed as if the membranes had been folded together and expelled very much in the same way as Matthews Duncan had proved the placenta to be in full time labours.

(*f.*) A photograph of CONGENITAL HYPERTROPHY OF THE HANDS (MACRODACTYLY) in a Siamese woman, 43 years of age, a beggar in the streets of Bangkok. For this photo also he was indebted to Dr Nightingale. The woman was a widow. Both her hands measured 13 inches in length and 9 inches across, and the forefinger had a diameter of about 4 inches. She could use the two last fingers of her right hand for eating her rice, but all the rest were useless. Cases of macrodactyly showing this degree of deformity were rare, but the minor degrees in which one or two fingers only were affected were more common. A case something like the present, but affecting one hand only, had been reported in 1895 by Galvani (Revue d'Orthopédie). The name 'congenital elephantiasis' had been somewhat loosely applied to these deformities.

(*g.*) A copy of BOAISTUAU'S 'HISTOIRES PRODIGIEUSES,' one of the rarest of the sixteenth century books on monstrosities and allied phenomena. He had long been on the lookout for a copy, and the great Washington Library had only recently acquired one. It was really a conjoint work by three authors, Boaistuau, de Tesserant, and de Belle-Forest. The inscription on the title-page read as follows: 'Histoires prodigieuses, extraictes de plvsieurs fameux Autheurs, Grecs et Latins, sacrez et prophanes, diuisées en trois Tomes. Le premier mis en lumiere par P. Boaistuau: Le second par Claude de Tesserant; et le troisiesme par Francois de Belle-Forest. Plus sont adioustees six histoires par B. G. auec les pourtraicts et figures. A Paris, Chez Iean de Bordeaux, a l'enseigne de l'Occasion, et au palays pres la chambre du Tresor, 1578. Auec priuilege, du Roy.' The work closed with the record of a case which occurred in the year of publication (1578), an infant with seven arms and a considerable number of heads. Some of the cases were well authenticated and find their counterpart in modern teratological collections; others it need scarcely be added, do not. The work was also interesting from the side-lights it threw upon the manners, customs, and beliefs of the sixteenth century.

VI. *The President* showed—(*a*) a VERY LARGE OVARIAN TUMOUR

which with its contents weighed 91 lbs. He had wished to operate earlier, but the patient would not give her consent till recently. (*b*) A DERMOID OVARIAN TUMOUR which had suppurated. (*c*) TWO OVARIAN SARCOMATA. (*d*) a PAROVARIAN CYST.

VII.—INSTRUMENTAL ASSISTANCE IN PARTURITION WITH EXHIBITION OF A NEW INSTRUMENT.

By C. F. PONDER, M.B., C.M., Edinburgh.

Abstract.

Under the above title Dr Ponder read a communication, the chief contentions of which are summarised in the following précis.

The principal point—Terminate all labours early—Primiparous labours should not be delayed much longer than multiparous.

The intention of Nature is that assistance should be given in human parturition—this increasingly so as civilisation advances.

Nature's method of effecting delivery—Dilating the parturient passage, and straightening, chiefly in a backward direction—Uterine expulsive force ordinarily sufficient to expel the child if the canal be opened up—Obstetrics simply copy Nature.

Midwifery forceps are beneficial when used in the low operation—early—and placed in relation to child's head—Their action then just the opposite of what is taught—Sir James Y. Simpson's forceps—Professor Simpson's forceps.

Low operation.—The action that of a lever of the third class—Its true actions, (*a*) *beneficial*, dilating, and increasing wedge action; (*b*) *harmful*, compressing, traction.

High operation.—The action that of a lever of the first class—The effect chiefly to increase the bi-parietal diameter of the head.

Midwifery forceps not a forceps at all. Its action understood by regarding the blades as of two parts—(*a*) *posterior* end, which performs the beneficial actions; (*b*) *anterior*, which performs the hurtful actions.

In conclusion Dr C. F. Ponder said—I now show you a model of the instrument I have devised. Its object is to act as a dilator of the parturient canal as opening up the passages, thus removing the obstruction, so facilitating the descent of the head.

You will observe that it consists of three blades, the anterior ends of which open out to form segments of a cup-shaped cavity which corresponds accurately with the normal fœtal head. The posterior blade is meant to push back the perineum, so straightening and dilating the maternal canal; the ridges on the outer surface of the blade are meant to ensure the increased wedge action of the forceps.

The anterior end of the blades form segments of two ovals—(1) with an antero-posterior diameter of $3\frac{1}{2}$ inches, corresponding to the upper portion of the pelvic canal; (2) the second, which

when completed by the pelvic arch, corresponding to the pelvic outlet.

The posterior blade is about 1 inch longer than the other two so as to enable the instrument, by increasing the conjugate of the brim to a certain extent, to facilitate the entrance of the head into the pelvic cavity.

The different parts are so locked together that they cannot possibly compress or exert traction on the head; so that screwing it up only tends to dilate the passage, and it forms, when screwed up, a rigid instrument, having the actions of dilating the maternal passages, protecting the head, and guiding it on its outward journey.

Such an instrument, if properly made, cannot possibly do harm to either mother or child. The practitioner will have no hesitation in applying it in normal labours. In this way we shall be able to achieve what I suppose all of us regard as the desideration of midwifery, viz., a short second stage.

The President, on behalf of the Society, thanked Dr Ponder for his paper, and said that though probably the Fellows present would not agree with his views, he had made many original and startling suggestions which would give rise to an interesting discussion.

Dr J. W. Ballantyne said that Dr Ponder in his present communication went much further than in his previous articles. He (Dr Ballantyne) believed in the occasional efficacy and even necessity of dilatation of the canals in front of the advancing head, but he certainly felt safer in carrying this out by means of his hand than by means of such an instrument as that described by Dr Ponder. Further, he thought that the risk of compression of the fœtal head by forceps was exaggerated; a vertical and compensationary elongation occurred which saved the nerve centres from injury in most cases.

Dr Lucas, Dalkeith, thought that Dr Ponder's idea of forcibly dilating the parts in normal labour was subversial of all previous teaching and practice. The membranes were intended by Nature to form a wedge for the dilatation of the parturient passages. Should this instrument be used for such a purpose it might certainly lead to very serious consequences.

Dr Milne Murray, *Wm. Taylor*, *Haultain*, *Easton*, *Keppie Paterson*, *Haig Ferguson*, *W. Fordyce*, and *Lamont Lackie* also took part in the discussion, and generally expressed disapproval of the views which Dr Ponder had stated.

In his reply Dr Ponder said—I would thank the Society for its reception of my paper, and the gentlemen who have spoken for their criticisms. I will begin my reply by repeating what I said at the commencement of my paper, that what I have here presented to you is only a brief résumé of the chief and debatable

points in the series of papers previously forwarded to our Society. If I had, in this lecture, said all I have to say on instrumental aid in parturition, I would have required not one hour only but three or four hours. These who have read my previous papers will remember that I have anticipated and discussed many of the objections that have now been advanced.

As regards my instrument, objection has been taken to the size of the gape of the anterior ends, to the sharpness of the edges of the blades, to the want of rounding off of the corners, and to its weight. These points, however, are only trivial. If in practice the instrument is found to be wrong in any detail, it can be easily altered, without in any way affecting the essential principles involved.

I would next repeat that my instrument is intended for normal cases, or for cases approximating to normal. Of course we all know that until the diameters are sufficiently reduced, the head has difficulty in descending through the parturient canal; that, say in occipito-posterior cases, there is difficulty and delay. But I maintain that even in such cases dilatation of the canal will tend to make the descent of the head more easy.

The estimates I quote of the amount of uterine expulsive force are those given by Sir James Young Simpson; perhaps you will allow that he is a sufficient authority.

As regards uterine inertia there doubtless are cases where the uterine force is absolutely wanting, but these are rare and sufficiently abnormal to be excluded from the cases to which my instrument would apply. As a rule in cases of ordinary uterine inertia the uterine force is only diminished, not wholly absent; it is masked by the undiminished resistance of the undilated passage. We know the value of rest and a dose of quinine in these circumstances. But I expect that it will be found that even in such cases, if the vaginal canal be dilated, the uterine force nearly always will suffice to expel the child.

Dilatation of the parturient canal by means of the hand or Barnes' bag has been recommended. I approve of dilatation in any form, and undoubtedly either of these methods would do good, but I think that my instrument will be found to act much more effectually than either of the plans that have been proposed.

MEETING IV.—FEBRUARY 8, 1899.

Dr J. HALLIDAY CROOM, *President*, and afterwards Dr J. W. BALLANTYNE, *Junior Vice-President, in the Chair.*

I. The following gentlemen were duly elected Ordinary Fellows of the Society:—George L. Chiene, M.B., C.M., 26 Charlotte Square, Edinburgh; and Percy T. Herring, M.B., C.M., Maternity Hospital, Edinburgh.

II. *Professor Simpson* showed a specimen of COLLOID OVARIAN TUMOUR, where rupture of some of the sacs had occurred. When cœliotomy was performed, the peritoneal cavity was found to contain quantities of free gelatinous masses adherent to visceral and parietal peritoneum, in the condition described by Werth as pseudo-myxoma peritonei. After the tumour was removed, a quantity of the free gelatinous substance was cleared out, but a quantity was also left behind. The operation was performed eight days ago, and, so far, the patient had made a smooth recovery.

III. *Dr Haultain* showed an EARLY TWIN ABORTION, at about the sixth week, in which could be seen the two embryos, one in its amnion, the other hanging free, the amnion having ruptured; both were contained in a common chorion. The decidua showed the characteristic appearances of deciduitis tuberosa, and this probably was the cause of the early expulsion.

IV. *Dr D. Lamond Lackie* showed a drawing of an INCARCERATED UMBILICAL HERNIA in an infant. It represented the appearance five days after the birth of the child. The cord was still attached, and by the side of it was the sac, covered only by the transversalis fascia, which was in a sloughing condition. Even under chloroform the hernia could not be reduced; but, as there was no actual obstruction, and as the general condition of the child was good, no operation was advised. Antiseptic dressings and pressure were applied, and when Dr Lackie saw the case again a fortnight later, the hernia was only half the size. He hoped that in time the whole would return into the abdominal cavity.

V. *The President* showed a SIMPLE OVARIAN TUMOUR, and referred especially to the cause of the death of the patient. The operation could not have been simpler; but, on the second day, the patient developed acute MANIA, and she died of exhaustion on the fourth. Fearing that the maniacal symptoms might simply have been the result of sepsis, he had ordered post-mortem examination, but no trace of septic infection could be found. Further, he had ascertained that the mental history of the patient's family was bad, and was convinced that this was a case of mania following ovariotomy. Such mental disease had been noted as a sequel of other abdominal operations.

VI. THE PRESENT POSITION OF THE PESSARY IN GYNECOLOGICAL PRACTICE.

By J. W. BALLANTYNE, M.D., F.R.C.P.E., Lecturer on Midwifery, Medical College for Women, Edinburgh.

THE examination of the Transactions of this Society, published during the last thirty years, reveals the fact that the question

of the employment of pessaries engaged the attention of the Fellows on exactly ten occasions[1] during that period of time. Seven of these ten occasions were prior to the year 1880, and only one was in the last decade. On only one of these occasions was the communication to the Society of the nature of a paper; in all the other instances it consisted in the exhibition either of a newly invented pessary or of an old support which had been worn in the vagina for a long term of years (five in one instance, sixteen in another). The precise amount of space in the Transactions occupied by the record of these ten communications was six and a half pages. Six and a half out of a total of five thousand four hundred and sixty-three pages does not appear to be an excessive amount of space to have set apart for the consideration of pessaries during thirty years. Further, the employment of vaginal supports is a matter which has scarcely at all come before the Society even in connection with other subjects of discussion. Some of the Fellows, and notably Simpson, have incidentally adverted to their use, while one Fellow has strongly animadverted on their employment (I mean Berry Hart,[2] in his admirably suggestive paper on a 'pathological classification of the diseases of women'); and Croom[3] has emphasised the dangers of intra-uterine stems in his 'criticism of some of the lesser gynecological manipulations.' These, however, have been passing references to pessaries, and I think I am right in stating that the question of their employment under the greatly altered conditions of modern gynecological practice has not been brought fully and formally before the Society.

It may be concluded from the paucity of references to pessaries in the Transactions of our Society that this means of gynecological treatment is so extensively employed and has its indications so exactly established as to give rise to no questions calling for discussion. It may also, and with the same degree of probability, be regarded as proving that the use of pessaries by the Fellows of the Society has been almost, if not quite abandoned, and that consequently nothing more remains to be said about it. A little thought, however, will be sufficient to show that it is still more probable that neither of these conclusions is warranted by the facts which are available for examination.

If an excursion be made into the territories of professional opinion and practice lying outside the necessarily limited area of the discussions which have taken place in this Society, it will, I think, at once become apparent that the use of the pessary is very far from being one of these matters about which it can be affirmed that the last word has been said. It will, indeed, be

[1] *Trans. Edin. Obstet. Soc.*, vol. i. p. 42; ii. p. 47, 217, 360; iii. p. 388; v. (2) p. 144; v. (3) p. 140; x. p. 163; xii. p. 128; and xviii. p. 68.

[2] *Ibid.*, vol. xix. p. 82, 1894.

[3] *Ibid.*, vol. xvi. p. 25, 1891.

found that gynecological opinion concerning this question is best described as in a state of flux.

I have endeavoured to form an estimate of the present position of the pessary in gynecological practice by an inquiry into the evidence bearing on the subject found in current medical literature (in text-books and journals), and in the experience of instrument-makers supplying the profession, and so able to gauge the trend of professional opinion on this subject. I have also incorporated, what is of much less importance, my own method of procedure in dealing with the gynecological cases which are generally regarded as requiring treatment by pessaries.

Before proceeding to extract from medical literature information on the status of the pessary in present-day practice, I may briefly refer to the evidence obtained from surgical instrument-makers on the demand for the various forms of uterine support now observed by them. I put to them certain questions, and I obtained the following answers:—

(1) During the last twenty years there has been a steady increase in the number of pessaries sold to the medical profession.

(2) Along with this increase in the total number sold there has been a steady decrease in the number of varieties asked for, so that at the present time the ring and the Hodge, in some form or other, and occasionally the vaginal stem with an abdominal belt, constitute practically the only ones in common use.

(3) Medical men show a marked tendency, after trying various forms of the Hodge, to return to the Albert Smith modification in vulcanite, and after testing rings of different kinds, to revert to the use of the simple india-rubber instrument containing a watch spring.

(4) More marked than the increase in the use of pessaries has been the growth in the demand for uterine curettes, and more especially for that variety commonly called Martin's. The increased sale of curettes, especially during the last six years, has been, so I am told, phenomenal; and along with it there has been a very striking decrease in the popularity of caustic-carriers and instruments of that type.

(5) Intra-uterine stems are hardly ever asked for.

Such were the answers given me by the Edinburgh instrument-makers, and the inspection of the catalogues of makers elsewhere on the whole supports the notion that there has been a general increase in the use of pessaries by the profession, and a decrease in the varieties so used. No doubt local influences have been at work in determining to some extent what shall be the favourite form of support in different places.

It is now necessary to inquire whether medical and more especially gynecological literature contain such references to pessaries and their use as will enable us to state that in this

matter specialists and the general practitioner are at one in their opinion and practice. In order to arrive at some conclusion on this matter, I have taken twenty well-known text-books on Gynecology, all published within the last ten years, and have analysed and epitomised the views on the employment of pessaries therein contained. The text-books selected were (in alphabetical order) those of Baldy, Balls-Headley, Bushong, Dührssen, Garrigues, Harrison (in Mann's System of Gynecology), Hart and Barbour, Herman, Küstner (in Veit's Handbuch der Gynäkologie), Labadie-Lagrave and Legueu, Lawson Tait, Lewers, Macnaughton-Jones, Mundé (in Keating and Coe's Clinical Gynæcology), Phillips, Pozzi, Simpson (in Playfair's System of Gynæcology), Skene, Webster, and Winckel. As far as possible I took the latest edition of each of these works. In some instances I found it a little difficult to form an opinion as to the author's own views on pessaries on account of the impartial way in which the subject was discussed; but generally there was sufficient evidence to indicate whether the writer was an ardent supporter of the mechanical treatment of displacements or not.

With regard to the primary question of the attitude of these authors to the use of pessaries in general, the result of the inquiry was as follows :—Eight were strongly in favour of this method of treating uterine displacements, five were strongly against it, and seven were critical and even sceptical without actually going so far as to condemn the method and banish the instruments. It is, however, necessary for me to qualify this statement to a certain extent. The most pronounced advocates of the pessary do not deny that it has inconveniences, that it requires to be used with care and intelligence, that it seldom really cures, and that it occasionally must give way to operative procedures. On the other hand, those that are most strongly opposed to its employment admit that there is a small residuum of cases in which the pessary either may or must be used. Further, the critical writers are not equally critical about all forms of pessary, and many of them freely concede that treatment by pessaries is fully justified in certain kinds of displacement although not in all. With this qualification I repeat that eight gynecological authors (Herman, Küstner, Lewers, Macnaughton-Jones, Mundé, Phillips, Simpson, and Winckel) were in favour of treatment by pessaries; five (Baldy, Balls-Headley, Bushong, Lawson Tait, and Pozzi) were much opposed to it; and seven (Dührssen, Garrigues, Harrison Hart and Barbour, Labadie-Lagrave, Skene, and Webster) held views which are best described as intermediate.

It may be well if I first set forth the chief objections that have been raised against the use of pessaries in general without in the meantime specifying any special kind of cases.

General Objections.

1. *Inconvenience.*—It has often been stated, and of course with perfect truth, that the wearing of a pessary is an inconvenience, amounting in some persons to unpleasantness. It necessitates periodic visits to the medical adviser, and leads to an unhealthy feeling of dependence upon him; it entails frequent if not daily vaginal douching; it may set up or aggravate a malodorous discharge; and it may (if certain kinds be used) interfere with marital relations. Balls-Headley, it may be remarked in passing, magnifies the last-named inconvenience into a danger to morals, for he says that the pessary thus 'strikes at the root of the institution of marriage, and especially of monogamy.'

2. *Inefficiency.*—Some gynecologists have been so firmly convinced of the inefficiency of even properly adjusted, well-fitting and carefully used pessaries, as to doubt whether they ever are the cause of relief from symptoms; most have no doubt at all that they never really cure, in the sense of complete restoration of the normal position of parts. 'I hate pessaries, and I never use them if I can help it,' are the words of Lawson Tait; and in another place in his book he says that he has 'many times wished that pessaries had never been invented.' At the same time he admits that there are cases in which he is compelled to employ them, and he then uses either Fowler's cup pessary, or the 'wedge' devised by himself. Even strong supporters of the use of pessaries generally admit that they very rarely cure, and are really temporary or half measures; and more need not be said regarding this aspect of the objection of inefficiency. But some go the length of asserting that they have not even the power of truly relieving symptoms. They aver that the evidence of patients who say their symptoms are removed is apt to be misleading; the support may be actually doing harm by still further damaging the natural supports of the uterus. The Zwanck pessary may be efficient in the sense of keeping up a prolapsed uterus for a time, but its efficiency is in the long run dearly bought. The displacement is treated but the cause is not removed, it is indeed aggravated.

3. *Injuriousness.*—It has been further alleged that pessaries are not only ineffective, but also injurious and even dangerous. Some gynecologists have stated this objection moderately, and have made exceptions as to certain kinds of pessaries used in certain cases and in certain kinds of ways: the intra-uterine stem, the Zwanck, and the large ball pessary have come in for special condemnation, while the ring and the Albert-Smith carefully used and in suitable cases have generally been acquitted. Other writers, again, have regarded as dangerous all pessaries, even the indifferent ones; and among the evil results attributed to their use have enumerated pruritus, vaginitis, ulceration fistulus for-

mations, the prevention of union of a torn cervix, subinvolution, cancer, and septic inflammation of the uterus and tubes.

Such are the leading objections that have been urged against the employment of pessaries in general, and I may perhaps best sum up this side of the matter by again quoting from Balls-Headley, who confesses that he is an 'apostate from complete faith in pessaries' after having been an intense believer. He asks what conditions then may be said to be left in which pessaries may be used, and he answers: a 'few cases of parous normal os with retroflexion, or prolapse from subinvolution of the endometrium and broad ligaments, and moderately lacerated perineum in women who refused or were unable to have the proper treatment for subinvolution or repair of the supports adopted, and whom it may injure, never cures, but ocasionally relieves.' 'With advancing knowledge, pessaries, like bleeding, will cease to be.'

General Advantages.

1. *Convenience.*—All the strong supporters of treatment by pessaries emphasise their convenience. An occasional visit to a gynecologist, occupying probably only a few minutes, frequent vaginal douching, which possibly would be required anyhow, a transitory feeling of uneasiness in the pelvis when the pessary does not exactly fit or has been worn rather too long, cannot surely be regarded as sufficient reasons for advising a patient to face the ordeal of a plastic operation with all its inconvenience, its expense, and its enforced confinement to bed for a longer or shorter time. As Mundé puts it, 'Not every patient who has a displacement of the uterus wishes to be operated upon for its permanent cure.' Further, there are the cases in which it is impossible for the patient, either on account of her advanced age or her occupation, to have any operation at all; in such instances the pessary becomes a great convenience.

2. *Efficiency.*—The opinion of all who make much use of pessaries in their gynecological practice is that they are undoubtedly effective in relieving symptoms. Some go further and state that they in many cases produce a permanent cure in a longer or shorter time. Mundé, speaking of recent displacements, affirms that in about twelve cases in a thousand the pessary may in a year or two be no longer needed. He says further: 'No tampons, no astringents, no massage, no electricity, no posture, no baths, no vaginal douches, will, in my experience, take the place of a properly fitted vaginal pessary.' Herman, writing on prolapse, says that 'If a vaginal pessary is retained and keeps up the uterus, relief is almost complete and greater than can be obtained in any other way'; and in referring to chronic retroflexion, he believes that only about one case in fifty calls for any other methods of treatment than that by pessaries. Lewers goes further than most of the advocates of the preferential treatment of displace-

ments by pessaries, for he affirms in relation to prolapse that 'no plastic operation will cure cases of procidentia; no matter how complete the success of the operation may appear at the time, unless the patient wears a pessary, the displacement will most probably return as badly as ever. If, however, she wears a ring, a permanent condition of comfort is obtained.' Macnaughton-Jones has no doubt as to the efficiency of the well adjusted pessary, for he asserts that 'in all forms of displacement where its employment is clearly indicated, it generally gives material relief.' The advocates of pessaries may differ in their views as to the manner in which these instruments relieve symptoms, but that they do relieve symptoms all are agreed. That they are effective means of treating displacements is, therefore, urged as their great advantage.

3. *Safety.*—Most gynecologists freely admit that the ordinary vaginal pessaries used with ordinary care are perfectly safe; but those who strongly advocate their use claim that even intra-uterine stems and instruments of the Zwanck type are quite innocuous. The bad results that are occasionally reported are ascribed by these pessary-partisans to want of care in adapting the pessary to the person, and to absence of precautions on the part of the patient wearing it. Several writers state that pessaries of the nature of the Zwanck must be taken out every night by the woman herself and replaced in the morning, and they do not apparently fear that she may be unable or unwilling to do so, nor do they dread any evil results from her want of knowledge of the anatomy of the parts. All these authors emphasise the safety of the pessary as contrasted with the danger of other, and especially of surgical, methods of treating displacements; and to them the remark made by Lawson Tait that he is certain that removal of the ovaries is 'a far safer proceeding than the employment of intra-uterine stems, and has the merit of being effectual,' must appear extraordinary indeed.

I have thus placed in order, the one over against the other, the statements of the strong advocates of pessaries and those of the strong opponents to their use. It is now necessary to take some notice of the gynecologists who give a critical approval to the employment of certain kinds of pessaries in certain kinds of displacements and under certain circumstances. This can best be done by considering the various displacements.

Pessaries in Prolapsus Uteri.

1. *Incomplete Prolapse.*—In cases of incomplete prolapse, where the perineum can still be depended upon to make retention of the pessary possible, many gynecologists recommend the india-rubber ring or Hodge-Smith, with or without transverse bars (according as there is or is not some degree of cystocele). It is claimed for this method of treatment that it relieves symptoms,

that it keeps the replaced uterus in its place, and that it so gives time for the normal uterine supports to regain their tone. It is further thought that should a pregnancy occur, or the climacteric be near at hand, this benefit may become permanent, and a real cure be effected. Most authors, however, are of opinion that the treatment by pessaries is in these cases only palliative, and the relief temporary. The alternative kinds of treatment in incomplete prolapse, with a certain degree of perineal efficiency, may be stated to be (1) the purely palliative plugging of the vaginal vault with glycerine or ichthyol tampons, with or without rest and douching; (2) uterine curettage to diminish the uterine subinvolution and restore tone; (3) anterior colporrhaphy, especially when there is marked cystocele; (4) perineorrhaphy even when the perineum is not markedly defective; (5) ventro-fixation of the uterus (not often); and (6) Alexander's operation (not often).

2. *Complete Prolapse.*—In cases of complete prolapse, where the perineum has almost or entirely lost its power of retaining a pessary in the vagina, the only form of support which is possible is the stem, with an abdominal belt and outside straps and perineal pad. The Zwanck and all instruments with hinges and screws are now generally regarded as both unsatisfactory and dangerous. Even with such stems and belts, as in Cutter's pessary, the relief afforded is only precarious, and often quite illusory (Pozzi). The only cases in which most gynecologists would countenance the wearing of such supports are in old women who either refuse or are too weak to be subjected to operative procedures, or in younger women who absolutely decline to be relieved in any other way. The most hopeful view that one can take of treatment by pessaries in these cases is that by their means a complete prolapse is turned into an incomplete one, and that in time it may be possible to replace the stem and outside straps by a single vaginal pessary (A. J. C. Skene). It is well to bear in mind that it is quite necessary before inserting a Cutter's stem to cure ulcerations and erosions on the cervix. It is questionable whether in all these cases equally satisfactory (or rather equally unsatisfactory) results might not be obtained by means of plugging the vagina tightly with marine lint, and renewing the packing every third or fourth day. The alternative procedures to pessaries in the treatment of complete prolapse are (1) perineorrhaphy; (2) colporrhaphy, anterior or posterior, or both, with or without perineorrhaphy; (3) ventrofixation of the uterus; (4) Alexander's operation; and (5) vaginal hysterectomy.

The rules which I have laid down for myself, and which I always attempt to carry out in cases of prolapse, are as follows:

In incomplete prolapse I endeavour first to exclude the physiological prolapse of an early pregnancy, and second, I try to assure myself that the symptoms from which the patient suffers are due

to the displacement itself, and not to concomitant conditions. As a general rule, no pessary is referred to or used on the first occasion of seeing the patient, but a simple tampon of cotton wool is introduced into the vaginal vault. At the second visit I am usually better able to determine to what extent symptoms are due to the prolapse, for in the interval the patient has been regulating the bowels. Not infrequently no further treatment than the care of the bowels, associated with the occasional introduction of a glycerine tampon and vaginal douching, suffices to remove symptoms, and the patient is possibly saved from a long course of pessary-wearing. In other cases symptoms persist, and I then, in accordance with the condition of the perineum and uterus, suggest either perineorrhaphy or curettage, the former when the cause of the prolapse seems chiefly to be due to weakening of the pelvic floor, the latter when it seems to be increase in the weight of the uterus. Sometimes both these operations may appear to be needed, then both are suggested. If, however, the patient do not wish to undergo an operation, I conceive it to be my duty to state what amount of relief she may expect to receive from wearing a properly fitted pessary, what inconveniences its wearing will entail, and what amount of medical supervision it will require. These matters having been explained, I then endeavour to adjust a pessary, generally a ring, to the vagina, often trying several before finding one which keeps up the uterus, gives no pain, and is retained. I instruct the patient to return if pain or vaginal discharge supervene, and at anyrate to come back in a week for examination, to use the douche twice in the week, and to avoid great exertion. If all goes well the patient will only require to return once in six weeks or two months, after the proper size of pessary has been arrived at, to have the support taken out, washed, and reinserted. I have under my care now a lady who, when I first saw her, was almost incapacitated from active life by a condition of moderate prolapse, with considerable enlargement of the cervix. Operative measures were proposed, but absolutely refused. A simple ring was then fitted to the vagina. The patient comes to me four times a year to have the support seen to, and, to use her own words, is in the intervals quite unconscious that she is wearing any support for the womb at all. She leads a very active life, suffers from no vaginal discharge at all, and has no pain. At the end of four months the pessary is not offensive. In another very similar case the pessary requires to be changed every month, and even then is distinctly offensive. I can find no satisfactory explanation for this difference, which I have noticed in other instances.

I think, therefore, that in cases of incomplete prolapse it is right to suggest radical means of treatment first, but if these are objected to, I do not think that I am justified in withholding the treatment by pessaries after I have explained that their action is

palliative. On the other hand, in cases of complete prolapse I recommend operative treatment, and even when patients object to it I still do not advise pessaries. I leave it to the patients to introduce the question of treatment by pessaries, and when they do I do my best to persuade them against it. It is with the greatest reluctance that I allow myself to be persuaded into treating any one save an old and feeble patient with such contrivances as vaginal stems with outside straps. These are necessary evils, perhaps, but I wish to be very sure that they are necessary.

Pessaries in Anterior Deviations.

1. *Anteversion.*—Most authors are now agreed that to try to treat anteversion of the uterus by pessaries is to use means which are inadequate to remedy a condition which is not itself productive of trouble. If, however, an enlarged, chronically inflamed uterus is more or less fixed in an anteverted position, then symptoms arise which are due immediately to the metritis. Consequently most gynecologists treat the metritis and the metritis only, and in doing so do not invoke the help of pessaries; but some think that the insertion of an indifferent pessary, such as the ring, is of value in hastening the cure by raising the uterus. Labadie-Lagrave, for instance, treats first the metritis, and when various means fail, endeavours to replace the uterus either by a hypogastric belt or by a ring pessary; with regard to such instruments as Graily Hewitt's cradle, he says: 'Mais beaucoup de malades ne peuvent les supporter, et souffrent davantage lorsqu'ils sont en place!'

2. *Anteflexion.*—That sharp anteflexion of the uterus and certain well known symptoms, such as dysmenorrhœa, sterility, and bladder irritability, commonly coexist must be admitted by all; but there is a vast difference of opinion among gynecologists as to the part played in the production of these symptoms by the displacement. Some doubt whether the anteflexion itself causes any symptoms, and are in consequence opposed to the use of pessaries. Others see in the displacement the immediate source of all the trouble, and are only in doubt as to the particular kind of pessary to be employed. I think most authorities are now agreed that a congenitally fixed and flexed uterus is not amenable to treatment by pessaries. Another point about which there seems to be general agreement is that no vaginal pessary will straighten an anteflexed uterus even when the uterus is fairly movable. The question in anteflexion and its treatment by pessaries has therefore narrowed itself down to the justifiability of employing intra-uterine stem pessaries. Even strong advocates of treatment by mechanical supports are in doubt whether the risks attendant upon wearing intra-uterine stems do not more than counterbalance any good effects which may arise therefrom. The dangers and risks incident to the wearing of stem pessaries are

well set forth by Skene, a gynecologist who is by no means opposed to the use of pessaries in general; the chief are sepsis, inflammation, and the perforation of the uterus. Various devices have been adopted to render intra-uterine stems innocuous, and while it cannot be said that anyone has succeeded, it may be admitted that the entirely intra-uterine (*i.e.* without a vaginal portion) pessary recently brought forward by Lefour comes nearest to the standard. It has been not infrequently claimed by the advocates of intra-uterine stems that menstruation, scanty and accompanied by great pain before the introduction of the stem, becomes profuse and painless after it has been placed in the uterus; but opponents of the stem point out that the pessary in such cases, instead of draining away discharge, has really produced the discharge by setting up suppuration, and has led to lesions that take months to heal (Baldy). Indeed, there seems to be a very widespread feeling that intra-uterine stems are too dangerous for ordinary use. Lawson Tait, in his remarks on displacements to the front, says, 'the only local treatment that will be of the slightest use is the galvanic stem, and that is far too risky!' Winckel is an exception, for he 'remains an advocate of intra-uterine elevators, although employing them less frequently than formerly'; he uses them in anteflexions after the inflammatory symptoms have disappeared.

What then, it may be asked, are the alternative methods of treating the symptoms associated with antrorsion of the uterus? In many cases it is the metritis that causes the symptoms, and in these the treatment is that of metritis—douching, ichthyol plugging, curettage, cauterisation. In others it would seem to be the coexisting undeveloped state of the uterus and especially of the cervix which is at the root of the trouble; then the occasional passing of the uterine sound, cervical dilatation, division of the cervix, and electricity (*e.g.* negative pole internal, five minutes of a current of from 50 to 80 m.a. twice a week for a month or six weeks, Milne Murray), and in very grave cases, removal of the ovaries.

In my own practice I have used pessaries scarcely at all in anterior displacements. I look upon the normal position of the uterus as one of *mobile* anteversion with a small degree of anteflexion, but I place more emphasis upon the condition of mobility than upon that of direction. Consequently, so long as there is uterine mobility I do not think of treatment by pessaries save only when I find an enlarged and subinvoluted organ lying anteriorly, and at a slightly lower level than usual when the insertion of an indifferent pessary, such as the ring, may occasionally give temporary relief from symptoms. When, on the other hand, there is not uterine mobility, pessaries are, in my opinion, neither safe nor effective. In these cases recourse has to be had to measures having as their object the relaxation of adhesions:

the minor gynecological methods, such as ichthyol tampons and the douch, I by no means despise, curettage I sometimes use, but with great caution, and with the growing conviction that in this operation under these circumstances it is probably the dilatation rather than the scraping that does good. Electricity I have not yet had occasion to employ, but I intend to use it in obstinate cases. Finally there is, I believe, a large number of instances in which the symptoms are really due to rheumatism affecting the uterine muscle, and then I find the employment of anti-rheumatic remedies internally with the abandonment of local treatment in the pelvis will often give great relief to the patient.

Pessaries in Retrorsions.

While pessaries are coming to be looked upon as unnecessary and ineffective in antrorsions, and as temporary and palliative props in prolapsus, it is evident that the mind of the profession is far from made up on the question of their use in retrorsions of the uterus. That this is so is fully borne out by the perusal of gynecological text books and current medical literature. Writing on retroversions, Skene sums up thus:—At the present day, I presume that if the harm done should be placed opposite the good accomplished by all the pessaries in use, the results would be about equally balanced. It follows then that as matters stand at this moment it is a question whether the human race would be better or worse if all the pessaries were put out of existence. The all-important fact remains, however, that pessaries are of great value and capable of giving relief to those who suffer from some of the forms of uterine displacement, if properly used.' Another circumstance, almost as significant in its way as this quotation from Skene, is the fact that several writers on gynecology have found it necessary to consider the question of pessaries in retrorsions under a number of headings. Thus, J. C. Webster divides cases of retroversion into seven classes and gives special direction for the management of each. It will be of service in demonstrating the difficulties met with if I give a synopsis of Webster's mode of grouping retroversions (and the same applies to retroflexions) in reference to their treatment by pessaries.

1. In retroversion with a uterus fixed by peritonitic adhesions no pessary is to be used.
2. In retroversion with a freely movable uterus, not enlarged, and with no pelvic trouble, there is no necessity for reposition and the pessary, but if there is bronchitis or the lifting of weights, then it is well to keep the uterus anteverted by a pessary.
3. In retroversion of a freely movable puerperal uterus with no pelvic trouble there is no need for a pessary, but if there are to be strains and lifting weights, then use a Hodge or Smith pessary.

4. In retroversion of the pregnant uterus use a Hodge or Smith up till the fourth month.
5. In retroversion with a movable uterus, with pelvic symptoms, but with neither ovary in the pouch of Douglas, use the Hodge or Smith.
6. In retroversion of a movable uterus with pelvic symptoms, and with one or both ovaries in the pouch of Douglas, use no pessary till the ovarian inflammation has been diminished by douching and plugging, then use first the ring, and afterwards the soft Hodge or Smith or Thomas.
7. In retroversion of a movable uterus with pelvic symptoms and old posterior perimetritis or cellulitis, follow much the same lines as those in the preceding rule.

Dr Webster gives, I think, a very fair statement of the views on the use of pessaries in retrorsions, which are held by those who are neither strong advocates nor strong opponents of pessaries in general, but are more or less critical regarding them. *The question of the treatment of retrorsions by pessaries is the watershed dividing the two currents of opinion on the subject of the employment of pessaries in general.*

This communication has already grown too long to warrant me in giving the various arguments pro and con the use of pessaries in backward uterine displacements, but it may be helpful if I pick out one or two leading points of interest. It seems, for instance, that most authorities are now agreed that it is necessary to replace the uterus before inserting a pessary. Herman is peculiar in thinking that the simple introduction of the Hodge will antevert a retroverted uterus; he admits that it will not effect this with a retroflexed organ, and establishes a distinction between retroversion and retroflexion founded not on symptomatology but on treatment in consequence of this difference in behaviour with the pessary. It seems also to be pretty generally accepted that in many instances the correction of a posterior deviation of the uterus by a pessary is followed by an amelioration or a total disappearance of the symptoms; but all are not agreed as to the manner in which this result is brought about, some ascribing it to the replacement of the uterus itself, and others to the relief of the concomitant morbid changes in the pelvis thus rendered possible. There is also general agreement that in retrorsions, pessaries scarcely ever effect a permanent cure; that is to say the giving up of the wearing of the instrument generally results in the return of the symptoms. There is an evident and growing tendency to treat first the so-called complications before resorting to the use of pessaries; and hence it has come that uterine fixation, uterine tenderness, ovarian prolapse and tenderness, and pelvic peritonitis and cellulitis have all been recognised as contra-indications to the immediate employment of pessaries.

An increase in this tendency will inevitably result in a great diminution in the number of cases treated by supports, for the curing of the complications will often make any further treatment by pessaries or otherwise unnecessary.

The alternative methods of treating the symptoms associated with retrorsions are vaginal tamponing, uterine curettage with or without intra-uterine cauterisation and vaporisation, pelvic massage, cervical amputation, vaginal fixation of the uterus, ventro-fixation, and the Alexander-Adams operation. Looking back over my personal experience in the treatment of the symptoms closely associated with retrorsions of the uterus, I am struck by the difficulty I have had in deciding upon the means to be adopted in individual cases. Under certain circumstances the line of procedure has been clear enough; thus in all the cases of retroversion of the *gravid* uterus that I have met with, I have obtained perfectly satisfactory results from replacing the uterus and inserting a Smith pessary, which the patient wore till about the fifth month of her pregnancy; while in all the instances of retrorsion of the uterus in the *unmarried* that I have seen I have not used pessaries, and have nevertheless been able to relieve the symptoms in most. But outside these two groups of cases I confess I have often had much thought as to the right line of treatment to be followed. For instance, I have under my care now a patient with a movable, slightly enlarged uterus, retroverted and slightly retroflexed; more than four years ago I inserted an Albert Smith pessary, with the result that the symptoms, which had been so marked as to prevent the patient doing her ordinary house work, completely disappeared; from time to time I have intermitted the use of the support with the consequence that the symptoms returned; about two years ago pregnancy occurred and ended normally but the pessary had to be resumed again after the puerperium. This patient refuses to consider operative means, urging that as long as she wears the instrument she feels quite well and has a normal menstrual flow. The patient's symptoms are entirely relieved; but can it be said that she is cured? In contrast with this case let me cite another; it is one of chronic endometritis in a retroverted uterus with symptoms, especially at the menstrual times, incapacitating the woman from the ordinary duties of life. I explained to her the probable advantages of immediate operative measures over the prolonged treatment by pessaries, and got her free permission to curette the uterus; this was accordingly done, the state of the mucous membrane apparently justifying the means employed and encouraging the hope of a permanent cure. No such good result, however, has followed, and I have been compelled to have recourse to the despised pessary which is now affording the patient the desired freedom from symptoms at any rate.

In the main, I find myself being guided in the treatment of retrorsions by the same considerations as J. C. Webster has set forth and to which I have already alluded; the occupation of the patient, the condition of fixity or mobility of the displaced organ, the presence or absence of pelvic symptoms, and the presence or absence of such complications or concomitants as ovarian prolapse or pelvic peritonitis all help us to determine whether the pessary is to be the means of treatment chosen or not.

There is one point to which it is necessary for me specially to refer in conclusion. It is that there is the greatest need for a fuller consideration of the selection of the pessary to be used in the individual case than is usually given. In the treatment of retrorsions this is peculiarly needful, for the pessaries used in such cases ought to be as nearly as possible moulds of the vaginal canal; in size, in shape, and in curvature, they should correspond to the size, shape, and curvature of the vagina. It may be that the support will require to be changed several times before a satisfactory result is obtained.

I have not touched upon pathological or congenital retroflexions, but I may say that I regard them as governed by the same laws as the pathological anteflexions.

It must be regarded as borne out by all the evidence that has been brought together that, taking a wide view of the place of pessaries in modern gynecology, we must look upon them as still having a sphere of usefulness within which their value certainly as palliatives and possibly also as curative means must be conceded. It has been said by Mundé that 'a pessary' (he is writing specially of retrorsions) 'is a necessary evil'; but I venture the assertion that pessaries are necessary, and not necessarily evil.

LITERATURE.

1. *Recent Text-books.**

* N.B.—This list simply includes the text-books epitomised in the paper.

1. BALDY (J. M.).—*American Text-book of Gynecology.* 1894.
2. BALLS-HEADLEY (W.).—*Evolution of the Diseases of Women.* 1894.
3. BUSHONG (C. H.).—*Modern Gynecology.* 1894.
4. DÜHRSSEN (A.).—*Gynæcological Practice.* 1895.
5. GARRIGUES (H. J.).—*Diseases of Women.* 1894.
6. HARRISON (G. T.).—In *Mann's System of Gynecology.* 1888.
7. HART (D. B.), and BARBOUR (A. H. F.).—*Manual of Gynecology.* 1897.
8. HERMAN (G. E.).—*Diseases of Women.* 1898.
9. KÜSTNER (O.).—In *Veit's Handbuch der Gynäkologie,* Bd. 1. 1897.

10. LABADIE-LAGRAVE (F.), and LEGUEU (F.).—*Traité de Gynécologie.* 1898.
11. LAWSON TAIT.—*Diseases of Women.* 1889.
12. LEWERS (A. H. N.).—*Practical Textbook of the Diseases of Women.* 1897.
13. MACNAUGHTON-JONES (H.).—*Diseases of Women.* 1894.
14. MUNDÉ (P. F.).—In *Keating and Coe's Clinical Gynæcology* 1895.
15. PHILLIPS (J.).—*Outlines of the Diseases of Women.* 1897.
16. POZZI (S.).—*Treatise on Gynecology*, vol ii. 1893.
17. SIMPSON (A. R.).—In *Playfair's System of Gynecology.* 1896.
18. SKENE (A. J. C.).—*Diseases of Women.* 1892.
19. WEBSTER (J. C.).—*Diseases of Women.* 1898.
20. WINCKEL (F.).—*Diseases of Women.* 1887.

2. RECENT COMMUNICATIONS (1897-1898).

1. BATUAUD (J.).—'Sur une modification au pessaire de Hodge dans les rétroversions compliquées de latéroversion,' *Rev. méd.-chir. de mal d. femmes*, vol. xix., p. 722. 1897.
2. DE BOVIS (R.).—'Corps étranger de l'uterus (pessaire) datant de quinze ans; intervention; guérison,' *Union méd. du Nord-est*, vol. xxii., p. 65. Reims, 1898.
3. DE BRUIJNE (J. W.).—'De pessarium-therapie bij retroflexio uteri.' Amsterdam, pp. 101. 1898.
4. DUKE (A.).—'A plea in defence of pessaries,' *Med. Press and Circ.*, vol. lxv., p. 569. 1898.
5. GILES (A.).—'On injuries due to pessaries retained in the vagina,' *Med. Press and Circ.*, vol. lxv., p. 400. 1898.
6. HAMMOND (F. P.).—'A belief that so-called displacements of the uterus are not pathological,' *Med. Rec.*, vol. liii., p. 793. New York, 1898.
7. HOERSCHELMANN (E.).—'Ein Fall von vernachlassigtem Pessar.' *St Petersb. med. Wchnschr.*, vol. xiv., p. 324. 1897.
8. LANDAU (T.).—'Is retroflexion of the uterus a disease?' *Med. Rec.*, vol. liv., p. 259. New York, 1898.
9. MOULLIN (J. A. M.).—'Some practical hints on the use of pessaries in flexions and prolapse,' *Clin. Journ.*, vol. x., p. 179. London, 1897.
10. NEUGEBAUER (F.).—'Sündenregister der Scheidenpessarien.' *Samml. klin. Vortr*, No. cxcviii. 1897.
11. PICQUÉ.—'Corps étranger de l'uterus, datant de quinze ans (pessaire), intervention; guérison par le Dr de Bovis,' (Rap.) *Bull. et mém. Soc. de chir. de Par.*, vol. xxiv., p. 31. 1898.
12. PINNA-PINTOR (A.).—'Nuovo pessario endoutero-vaginale.' *Gior. d. r. Accad. di med. di Torino*, vol. xlv., p. 314. 1897.
13. REAMY.—'Treatment of malpositions of the uterus by pessaries,' *Amer. Journ. Obst.*, vol. xxxvi., p. 374. 1897.

14. RICKETS (E.).—'Pessary worn for nineteen years,' *Cincin. Lancet-Clinic*, vol. xl., p. 629. 1898.
15. SEELIGMANN (L.).—'Ein neues Pessar,' *Allg. med. Centr. Ztg.*, vol. lxvi., p. 1279. 1897.
16. SPRIGG (W. M.).—'Pessaries in the treatment of retroversions of the uterus,' *Amer. Journ. Obst.*, vol. xxxviii., p. 862. 1898.
17. WILLARD (ROSE).—'Pessary worn over thirty years,' *Woman's Med. Journ.*, vol. vi., p. 165. Toledo, 1897.

Professor Simpson thought the Society were indebted to Dr Ballantyne for bringing this important subject again under discussion in a communication so well balanced and judicious. The opinions he had expressed gave a very fair impression of the value of the treatment of uterine displacements by means of pessaries. There was no doubt in his (Professor Simpson's) mind that much of the diversity of opinion that had arisen among gynecologists was due to the different temperaments of the writers. There were some who found it a great trouble to adjust a pessary, and who felt that the best they could do for their patients was to order them to use douches, and rest, and disregard their symptoms, and be comforted with the assurance that there was nothing much the matter with them. There were others with a fierce delight in surgical enterprise, who felt that they had not done their best till they had subjected the uterus to some kind of fixation. Both these groups of gynecologists had indulged in denunciation of pessaries, which was quite unwarranted. It might be easy to formulate a case against all the ventro- vesico- and vagino-fixations, because of the damage that had been done in individual cases, and there was already quite a literature showing the obstetric troubles that may arise in the way of abortions and dangerous labours in cases where the uterus had been thus dealt with. It was better to recognise the conditions in which surgical procedures became necessary, and to appreciate their value. So with regard to pessaries. Their dangers had been dwelt upon: but there was really no danger in the wearing of a properly-adjusted pessary. In many cases there was perfect comfort, and often the application of a pessary had been followed by conception in barren women, both in the primary and acquired forms of sterility. Even he (Professor Simpson) agreed with Winckel that there were occasional cases of flexion where an intra-uterine stem relieved the dysmenorrhœa due to flexion, and the statement Dr Ballantyne had quoted as to the relief being due to increased blood flow and suppuration was simple nonsense. The paper of Dr Ballantyne was both interesting and valuable.

Dr Haultain thought there was a happy middle course to be adopted in the use of pessaries. He had entirely ceased to use the soft rubber rings, on account of the readiness with which they became offensive and gave rise to unpleasant leucorrhœa, in spite of the utmost cleanliness on the part of the patient. The fre-

quency with which they were used was undoubtedly from the ease of their introduction. The rigid vulcanite pessary of all shapes were much cleaner, and did not require to be changed oftener than once in four months, or longer in ordinary cases. He could not adopt Dr Webster's classification so implicitly as Dr Ballantyne, as he considered that all cases of prolapsed and tender ovaries were not contraindications to the use of pessaries; as frequently he had observed that on the reposition of the uterus, from the close attachment of the ovaries to the uterus, they were lifted up with that organ, and were thus not subjected to direct pressure by the instrument. Dr Ballantyne had not touched on the question of the value of pessaries in retroversions and retroflexions of the uterus respectively. This was an important practical point, as there was little doubt that retroversions were much more amenable to treatment by pessaries than retroflexions; in the latter the weak point was in the uterus itself, and the amount of intravaginal support would improve some cases. He always felt that the progresses as regards even palliative treatment by pessaries in retroflexions was much less favourable than in retroversions.

Dr Church thought it desirable to give salicylate of soda to uterine cases, in order to eliminate a possible rheumatic element. If a pessary must be worn, it was desirable to have it removed every few weeks, cleansed, and replaced. Injury might result from wearing an instrument indefinitely.

Dr Lackie said he had listened to Dr Ballantyne's paper with great interest. He had often been struck by the fact that a pessary, while failing to retain the uterus in proper position, had relieved the patient of all her symptoms. One frequently found the uterus still retroverted or retroflexed, and yet the symptoms, while the pessary was in position, were much relieved. The instrument supported the whole organ, and removed the downbearing pain which was so often complained of. With regard to stem pessaries in cases of acute anteflexion, he had seen cases in which great benefit resulted from the use of these.

The President regarded Dr Ballantyne's paper as a most valuable contribution. He congratulated Dr Ballantyne on the very definite views which he held with regard to the use of pessaries. He also had definite views and fixed rules which guided him in practice. One must distinguish between displacements in nulliparous and multiparous patients. With regard to the former group of cases, the forward displacement was generally an anteflexion, which he regarded simply as a congenital deformity for which no form of vaginal pessary was of any avail in relieving symptoms. The same remark applied to backward displacements in nulliparæ; but occasionally one found that a vaginal pessary did relieve the symptoms. In multiparæ, forward displacements were due to inflammation and shortening of the utero-sacral ligaments, and the treatment consisting in curing the

inflammatory condition, no pessary in such cases should be employed; if used, it did harm. With regard to backward displacements in multiparæ, the uterus could frequently be kept in normal position by a suitable pessary. A previous curettage was often necessary. He believed in retroflexion the best pessary was the ring, and in retroversion the Hodge.

Dr J. W. Ballantyne considered that the purpose of his paper had been served in the interesting discussion which had taken place. He thought that it might be said of all those who had spoken, that they were in favour of the careful employment of the pessary in a very considerable number of cases, including specially retrorsions in multiparous women. Notwithstanding what Professor Simpson had said, he still felt much averse to the use of stems in flexions; he conceived that if they were not rigid they were not effective, and that if they were rigid enough to be effective they were dangerous. He agreed that sterility as an indication for the use of pessaries had in his communication scarcely been sufficiently dwelt upon. He noted that Dr Church agreed with him regarding uterine rheumatism, and was sure that many cases of it occurred, and were of course in no way benefited by pessaries, but were greatly improved by anti-rheumatic drugs, such as colchi-sal.

VII. VAGINAL HYSTERECTOMY FOR CANCER.

By J. Halliday Croom, M.D., F.R.C.P.Ed., F.R.C.S.Ed., F.R.S.E., President Edinburgh Obstetrical Society; Physician and Clinical Lecturer on Diseases of Women, Royal Infirmary, Edinburgh.

The question of vaginal hysterectomy for various conditions has been already so fully and exhaustively dealt with in the Society, in papers by Professor Simpson and Dr Barbour, that I do not think I need enter into any discussion as to the history of the operation, or how its technique has been evolved.

In any account of vaginal hysterectomy, with our improved methods of operation, recovery is, as a rule, to be expected. The immediate risks of the operation, when undertaken in circumstances at all favourable, are small. Those cases which succumb shortly after the operation must and can only be badly selected ones, where the fornices are small, where the disease has involved the posterior wall of the bladder (a condition always difficult of diagnosis beforehand), or where hæmorrhage or sepsis has resulted. But, in any well-selected group of cases, such an untoward event is never to be looked for.

In the list of cases which I now publish, all the patients immediately recovered except one, who died from sepsis some days after the operation, due to my having failed to realise that the uterus was closely attached to the bladder, the whole tissue being

soft and friable. The operation was thus, to a certain extent, incomplete. So, therefore, I may dismiss now any question about vaginal hysterectomy, so far as my present paper is concerned, except the question of the remote results.

Neither Professor Simpson's nor Dr Barbour's paper touches upon this. They deal only with the history and technique of the operation, and the records of immediate results, which are entirely satisfactory ; and to Professor Simpson we are especially indebted for bringing the subject directly and definitely before us.

I am at present concerned with the question, as to how far this operation prolongs the life of the patient ; and, before touching upon that matter, another question readily suggests itself. I suppose no one will deny that a case, to be not only immediately but also to be remotely successful, must necessarily be attacked in its most early stage. Now, a very early carcinoma of the cervix, still more an early tubular carcinoma of the body of the uterus, will, under ordinary circumstances, give an expectation of life for the patient, of eighteen months to three years. With sarcoma the expectation is distinctly longer. Therefore, in ascertaining the value of any operation whatever, the first question to decide is, Whether or not that operation can prolong the patient's expectation of life? and, obviously, the second question is, Whether it prolongs her expectation of life or not, does it relieve her symptoms, and give her an easier death than she would have had if no operation had been undertaken? These are the two questions which, in this paper, I propose to discuss.

During the past ten years, 300 cases of cancer have presented themselves to me, either in the wards of the hospital or in my consulting-room, and with regard to these I have the following remarks to make :—

1. They include not all the cases of cancer which I have seen, but only those which have been admitted to my ward, or which I have seen in my own consulting-room. I have not included those cases seen in the out-patient department, and of those which I have seen in consultation in private I have kept no record. Hence, therefore, the experience which I am putting before you may seem rather less than might have been expected.

2. The accompanying table includes all the cases of cancer of the uterus for which I have performed vaginal hysterectomy, except two, and those two were done in my earlier years, and were, in some respects, incomplete. On that account they must be omitted in estimating the value of the operation. The 14 now recorded were performed with the Greig Smith and Doyen improvements of the operation ; and, save one, they were complete in every detail. Of the 14, only 3 were done in the hospital, the others in private, which is itself a suggestive fact, because those seen in private practice are always seen at an earlier stage than those which apply for advice to a hospital. Each one of those 14

No.	Name.	Age.	Married or Single.	Complaint.	Duration.	Family.	Physical Examination.	Operation.	Remarks.
1	H. S. . .	47	..	Pain in abdomen and back; profuse hæmorrhage; weakness.	10 months.	..	Primary carcinoma uteri.	Hysterectomy.	Immediate recovery; died 9 months later from recurrence.
2	K. O. . .	36	S.	Pain in stomach and bearing down.	2½ years.	..	Early epithelioma of cervix.	,,	Immediate recovery; died 18 months later from recurrence.
3	H. S. . .	48	S.	Bearing-down pain; constant desire to micturate; brownish, foul, watery discharge.	6 months.	One, 22 years ago.	Carcinoma cervicis.	,,	Death.
4	M. B. . .	49	M.	Profuse hæmorrhagic discharge with severe pain.	21 months.	Eight, last 4 years ago.	Early carcinoma cervicis.	,,	Recovery, but died 14 months later.
5	I. M. . .	51	M.	Flooding.	2 months.	..	Early carcinoma of the cervix.	,,	Recovery, but died 16 months later.
6	Mrs. L. .	32	M.	Foul discharge.	2 years.	Five, last 4 years ago.	Early epithelioma cervicis.	,,	Recovery, but died 1 year later.
7	Mrs S. .	44	M.	Hæmorrhagic discharge, constant.	4 months.	Thirteen, last 1 year ago.	Early epithelioma of cervix.	,,	Recovery, but died 8 months later.
8	M. F. . .	38	M.	Pain; foul discharge.	12 months.	Ten, last 2 years ago.	Early cervical cancer.	,,	Recovery, but died 17 months later.
9	M. A. H. .	43	M.	Constant offensive discharge, with pain in left iliac region.	6 months.	Eight, last 5 years ago.	Cervix thickened and indurated. No deposit in fornices; carcinoma cervicis.	,,	Recovery, but died 1 year later.
10	I. S. . .	58	S.	Periodic pain in lower part of abdomen; hæmorrhagic discharge.	4 months.	None, unmarried.	Cervix smooth; uterus enlarged, but movable.	,,	Recovery, but died 11 months later.
11	J. S. . .	38	M.	Menorrhagia and metrorrhagia.	5 months.	Three, last 13 years ago.	Thickening and erosion of cervix; early epithelioma cervicis.	,,	Recovery, but died in one year.
12	J. H. . .	29	M.	Hæmorrhagic discharge.	6 weeks.	Five, last 6 years ago; 1 abortion.	Cervix hard and indurated; uterus movable; carcinoma cervicis.	,,	Recovery, but died 10 months later.
13	J. W. . .	49	M.	Constant hæmorrhagic discharge; pain.	11 weeks.	Nine, last 12 years ago; 3 miscarriages.	Carcinoma cervicis (early).	,,	Recovery, but died 16 months later.
14	E. W. . .	33	M.	Pain in side; frequent flooding.	8 months.	Three, youngest 8 years.	Carcinoma cervicis (early).	,,	Recovery, but died 8 months later.

cases was most carefully selected; all the others, if interfered with at all, were only dealt with by the ordinary palliative measures.

3. These cases include all the recognised forms of cancer affecting the cervix and the body of the uterus.

It would be a work of supererogation to describe each case of those operated upon in detail; nor have I any intention of referring to those cases in which merely palliative operative interferences were employed, such as amputation of the cervix, and the employment of the cautery, etc.; but I refer only to those in which I performed vaginal hysterectomy.

First let me take a hospital case:—

CASE 1.—A widow, mother of four children, a worker in a Dundee mill, presented herself at the hospital, complaining of slight pain in the back, and menorrhagia. Now there was no leucorrhœa, no fœtid discharge, no bleeding, and no emaciation, and a certain slight degree of erosion and eversion of the cervix was all the sign of disease that could be found. At first it was supposed to be a case of cervical catarrh, and was put under treatment appropriate to such a condition. As there was no improvement after a fortnight, and as the cervix seemed to become suspiciously hard, a piece of tissue was examined by competent authorities at the laboratory of the Royal College of Physicians, and the condition pronounced to be malignant. As the case fulfilled every one of the conditions for hysterectomy—mobility, non-involvement of glands, and freedom of the ligaments, with apparently no infection of the body of the uterus or the bladder—the operation was performed, lasting eighteen minutes, and the patient made a perfect recovery. The further history of that case is as follows:—

The operation was done on 16th July. The following Christmas the patient was seen by Dr Lackie, who said that there were several bleeding nodules at the site of the cicatrix, and that the patient was suffering pain. During my absence in April, Dr Lackie again saw her, and pronounced the whole pelvis to be occupied by a cancerous mass, with hæmorrhage, emaciation, and great pain. She died during that summer.

Now, my comment upon this case is—(1) That I could not wish for a more suitable case, both as to the general and local conditions, to operate upon, and that the operation could not be easier or shorter; (2) that for a short period of a month or two the patient was comparatively well; and (3) that in six months the disease had recurred with intense pain, in nine months there was a fungating cancerous mass in the pelvis, in a year the patient was dead.

Now, I am bound to say that, so far as my experience of such a case of cancer is concerned, had the patient been left alone her expectancy of life would have been from eighteen months to two

years, and her sufferings, which were very great, would have been less.

With regard to CASE 2, it is that of a lady from the west country, æt. 47 years, and in evidently robust health. Her symptoms were chiefly severe pain in the back and loins, with some hæmorrhagic discharge. Her doctor, Dr Muir, who sent her to me, believed she was suffering from an early cancer of the uterus. When I saw her the uterus was perfectly mobile, not enlarged, the fornices were free and no glands were involved, and, save a distinct hard nodular cervix, there was nothing abnormal to be found. I was disposed to agree with Dr Muir as to the malignancy of the case, but had a specimen examined, and the report confirmed this opinion. The operation was performed quickly and easily, after Doyen's method, and the patient made an absolutely uninterrupted recovery, leaving the Nursing Home a month from the day of operation. Three months afterwards the pain recurred, and soft, granular, bleeding masses appeared at the site of the wound. From that time onwards the pain was so severe, that the patient practically lived on opium, and died seven months after operation.

My comment on this case is, that this woman had only a very short immunity from pain. In three months it recurred, and except for morphia her life would have been intolerable. The disease had markedly affected the peritoneum, although the mass in the pelvis never became very large. This woman's expectation of life when I first saw her was unquestionably from a year to eighteen months, and as a matter of fact, with all the so-called advantages of the operation, she only lived seven months.

The third type of cases is illustrated by the following:—

CASE 3.—When I first saw her she was supposed to be suffering from an incomplete abortion. She was a lady in the enjoyment of excellent health, except for persistent hæmorrhage, which had lasted for two months before I saw her. I was quite contented to believe that the diagnosis given me by her medical attendant was correct and I proceeded to curette the uterus, which was enlarged, with the cervix somewhat gaping, and well-marked ectropion. I submitted the debris removed by curettage to Mr Stiles for microscopic examination, and to my surprise he told me the case was one of tubular carcinoma. Even from such an authority as Mr Stiles I was unwilling to accept this, and it was only after an interval of a fortnight that I removed another scraping for examination by Mr Stiles, but his report was just the same as before. I therefore, without further delay, performed vaginal hysterectomy. If ever there was a case in which the operation was easy, this was the one: and where hopes of remote recovery were warranted, there never was a better, because the broad ligaments were absolutely free, and the disease was entirely localised to the fundus and body. Now, within six weeks she

had slight recurrence of the hæmorrhage from the cicatrix, and an enlarged gland in the left groin. She went to her home in the north, and although I never personally saw her again, she died of malignant peritonitis within the year.

My comment on this case is obvious. A woman's expectation of life with intra-uterine cancer is from two to five years. Howard Kelly, himself a keen operator, admits five years as a possible duration for an intra-uterine cancer, when not interfered with. This patient was in excellent health, she suffered absolutely no pain, and had no symptom except the hæmorrhage; and had it not been for the practice that I invariably make of having the scrapings after a curettage examined by the microscope, this patient would have gone home without any reason to suppose she was suffering from cancer of any sort or kind. It will be further observed that she had no pain before the operation, and it was only afterwards that, when the disease spread to the peritoneum, her pain was intense, and she died in terrible suffering from malignant peritonitis.

I need not multiply examples, because in all the other cases the history before and after the operation is somewhat similar. But perhaps I may be allowed to show the converse. A lady came under my observation with what I supposed to be senile uterine catarrh. I do not usually dilate and scrape in this condition, but as the os uteri was somewhat gaping, and the hæmorrhage rather profuse, I further dilated the cervix, and curetted and packed the cavity. The report on the scraping was "well-marked carcinoma." I announced this to the patient's friends; and for various reasons, personal, domestic, and otherwise, any further operative interference was declined. Personally I was not sorry for this, because the uterus was somewhat fixed and the fornices small, and the operation would not have been a very easy one. That was in 1894; to-day, though seriously ill, she is still alive, and only recently has she suffered much at all. During these years she has at intervals enjoyed many consecutive weeks of excellent health. Her position in life allowed her to have every luxury, which may possibly have had something to do with the prolongation of her life; but nevertheless the fact remains, that four years ago she had fundal cancer, verified by the microscope, and she is alive still.

My further comment on this case is, that that duration of four and a half years is probably an under-estimate of the time, because it is a certainty that the cancer had originated a considerable time before I first saw her. I must admit that this is a longer duration than is commonly met with, but a three years' duration is by no means uncommon in my experience.

I have already intruded myself on the Society too long, having gone into the question some months ago, but I should like to say that in the present paper I am not dealing with anybody's

results but my own, nor am I venturing to criticise any other operator's work. I am only stating my own experience of vaginal hysterectomy for cancer. This has been an unfortunate one; but it seems to me the duty of every operator, whatever his ability or experience may be, to record his ultimate results, even though the truth so told may tell against himself. Let me add that all these cases operated on were exceptionally favourable ones, and selected with special care. Bad though my results have been, I tremble to think of what they might have been had I operated on cases indiscriminately. I am hopeful, however, that by some improvement in the management of the wound at the time of operation, so that the diseased surface may not come in contact with the peritoneum, infection may become less likely, and better remote results be secured.

I shall continue to operate upon early selected cases until I succeed, or until some method of dealing with cancer, such as by the serums or the antitoxins, will render operative treatment unnecessary.

Dr Haultain had listened with much interest to Dr Croom's report of his cases and sympathised with him in his most unfortunate results. From the results acquired by others, and also from his own small experience, he could not help stating that total extirpation of the uterus was an operation which should always be performed on cases of carcinoma uteri where there was any chance of removing the entire disease; to assume any other view was to condemn every case of malignant disease of the uterus to certain early death. By adopting Doyen's method of extirpation, as Dr Croom had mentioned as the mode employed in one of his illustrative cases, he thought it probable that the wound or peritoneum had been infected in the course of the operation, and if this method had been adopted in the other cases it might account for the frequency of early recurrence of the disease, as it was now well known this was one of the commonest means to which return of the disease could be traced.

He should like to ask Dr Croom what he proposed to recommend future patients who consulted him with uterine cancer? Was he to advise against operation? This he considered most important, as his decision must, from Dr Croom's eminent position in the speciality of gynæcology, weigh very materially with the attitude taken up by general practitioners in these cases, they being less able from experience to form a definite opinion of their own on the subject.

He considered it a noble act of Dr Croom bringing forward in such an honest manner his failures. One learned more, perhaps, from a record of failures than from one of successes, and he congratulated him on his force of character in placing this record before the Society.

Dr Lackie said that, since in recent years he had seen all the cases on which Dr Croom had operated, and had assisted at most of them, he might be allowed to testify to the care with which the cases were selected and the ease of the operation. He had shared Dr Croom's hope that the result would be permanently good, but he had also shared his disappointment when some months later he either saw for himself the recurrence of the disease or heard that such had taken place. Dr Brewis had referred to hysterectomy for uterine cancer by the abdominal route. Dr Lackie, in conversation with Dr Clark, assistant to Professor Howard Kelly, had heard that although at John Hopkin's Hospital the results were considered better than when the operation was undertaken by the vaginal route, they were by no means satisfactory, and recurrence was frequent.

Dr J. W. Ballantyne regarded the results obtained by Dr Croom in his treatment of cancer of the uterus by vaginal hysterectomy as extremely disappointing, especially as the operations themselves were immediately recovered from and the material so carefully selected. Possibly, as Dr Haultain had suggested, infection of the peritoneum might have taken place during the rotation of the uterus in the process of extirpation. It certainly would be well to curette the uterus and cervical canal as a preliminary procedure in such cases in order to diminish the risk of peritoneum-infection.

Dr Halliday Croom in reply said that he had had some curious cases of cancer. For example, twenty years ago he had amputated an undoubtedly malignant cervix, and the patient was alive now, there never having been any recurrence. At the time he regarded his operation as purely palliative, but apparently it had been curative.

With regard to Dr Haultain's question, he would simply feel it his duty to point out to a patient that his results had been bad and let her choose. He congratulated Dr Brewis on the results which he had obtained, and hoped that they would be permanent.

MEETINGS V. AND VI.—MARCH 8 and MAY 10, 1899.

Dr J. HALLIDAY CROOM, *President, in the Chair.*

I. The following gentlemen were duly elected Ordinary Fellows of the Society:—William Bertie Mackay, M.D., 23 Castlegate, Berwick-on-Tweed; James K. Drysdale, M.B., C.M., 22 Coltbridge Terrace, Edinburgh; and C. H. Kruger, F.R.C.S.E., South African Union, Edinburgh.

II. *Professor A. R. Simpson* showed—(*a*) a DERMOID OVARIAN

TUMOUR; and (*b*) A FIBROID TUMOUR of the uterus and DISEASED APPENDAGES.

III. *Dr J. W. Ballantyne* exhibited—(*a*) FROZEN SECTIONS and PHOTOGRAPHS of an Iniencephalic Fœtus which had been sent to him for examination by Dr Jas. Wilson. It was the product of the second pregnancy of a woman who had enjoyed good health till nine months ago, when she aborted at the third month; for the first two months of the present pregnancy there had been great sickness, there had been also very great thirst both during the day and at night, and there had been remarkable constipation, the bowels moving only once in three weeks, and this had been a life habit with the patient. The kidneys were not affected. The fœtus, a small male, was a very perfect example of iniencephaly; the umbilical cord was very thick, being plentifully supplied with the jelly of Wharton; and the placenta had a normal appearance. The frozen sections showed sharp retroflexion of the head upon the trunk; the basis cranii looked directly backwards; the cervical region of the spine showed marked lordosis with compensatory kyphosis in the dorso-lumbar region along with some torsion. The cranial vault was defective in the neighbourhood of the posterior fontanelle, and through the opening thus produced the cerebrum projected into a sac which lay on the back of the fœtus; further the cartilaginous occipital bone was directed downwards leaving in front of it a very large foramen magnum in which lay the cerebellum and the spinal cord. The urinary bladder contained some perfectly colourless urine. In the dorsal sac above referred to there was much blood clot as well as cerebral substance; doubtless this sac had ruptured during labour.

(*b*) FROZEN SECTIONS and PHOTOGRAPHS of an Anencephalic Fœtus which he had received from Dr Robert T. Ferguson, of Anstruther. The specimen was the product of the fourth pregnancy of a very nervous but otherwise healthy woman. Labour supervened about three weeks before it was expected. There was great abdominal swelling suggesting either twins or hydramnios, and the external genitals and one leg were also swollen. For the four preceding weeks she had been nursing a boy with a typhoidal condition. Dr Ferguson could not feel the fœtal head presenting as the os was very rigid and the part high up. The pains were very weak and the patient exhausted from want of sleep and food. The os was gradually dilated under chloroform and the membranes ruptured when an enormous gush of liquor amnii took place (estimated at a gallon.) The presentation was very puzzling, as nothing but one ear could be recognised. As there were no pains, forceps was used, but would not stay on. Version was also tried unsuccessfully. Uterine action became more effective and finally by means of manual traction upon the lower jaw (which separated during the effort), and supra-pubic pressure the

fœtus was born. The placenta was small, and the cord was 21 inches long. The frozen sections showed a typical anencephalic female fœtus. It might be added that the mother was thirty years of age, and had had three perfectly healthy children. There was no history of any maternal impression. Previous to the present pregnancy the mother had suffered from an attack of nephritis with pyuria.

(*c*) FROZEN SECTIONS and PHOTOGRAPHS of a case of Anencephaly and Retroflexion of the Spine. The specimen had been sent to him for examination by Dr Freeland, of Broxburn. The mother was a Scotswoman married to a German, she was twenty-two years of age and a primipara. She had been well during the whole course of the pregnancy, and had had no foreboding of anything being wrong. Labour came on about the eighth month and delivery was easy, but there was great hydramnios. The presentation consisted of the anencephalic head with both hands coming down alongside of it. The sections showed very clearly the retroflexion of the spine, and the striking way in which the vagina seemed to be almost the only content of the pelvis. The great toe of each foot was in a state of contracture. The cord showed a marginal insertion into the placenta.

IV. *Dr Lamond Lackie* showed—(*a*) CYSTIC OVARIES; and (*b*) TWO SETS OF APPENDAGES.

V. *Dr W. Fordyce* showed an OVARIAN TUMOUR with marked Twisting of the Pedicle.

VI. *The President* showed—(*a*) a CYSTIC OVARY removed from a young lady of twenty-six years of age, for well-marked Mittelschmerz. This occurred regularly fifteen days after the usual menstrual epoch and lasted for two days, completely unfitting her for her duties, and as she suffered from severe dysmenorrhœa as well her life was practicably intolerable. All other means having been tried unsuccessfully, the right ovary was removed. It was enlarged and cystic; the other ovary was normal.

(*b*) AN OVARIAN TUMOUR which as far as diagnosis and removal went, required no remark, but the after history was interesting because in the fourth week of a normal convalescence the patient became acutely demented and left the home in that condition. Details were postponed till the paper was read.

VII. ON ACUTE MANIA FOLLOWING SIMPLE OVARIOTOMY.

By J. HALLIDAY CROOM, M.D., F.R.C.P.Ed., F.R.C.S.Ed., F.R.S.E., President, Edinburgh Obstetrical Society; Physician and Clinical Lecturer on Diseases of Women, Royal Infirmary, Edinburgh.

THERE is no novelty in recording a case of insanity following any form of abdominal operation. All sorts of psychoses have

been observed following such operations, including melancholia, mania, dementia, and hystero-epilepsy; and I should not venture to record this case, were it not that it has two elements which render it specially interesting.

CASE 1.—Mrs G., married, but sterile, was sent to me, from Ayrshire, with a simple ovarian tumour. The prognosis of the case was excellent. The patient was in very good health, was 44 years of age, and had never been in bed from any illness; she had never tasted alcohol, and had an excellent family history. She was sent to a nursing-home, and the operation was performed with ease. There were no adhesions or complications of any kind, the tumour being a simple ovarian cystoma. In the course of the forenoon the patient recovered from the shock of the operation, and by evening she expressed herself as feeling quite well. The pulse and temperature were normal. The following day she continued well. On the third night she became restless and slightly incoherent in her speech, with a slight rise of temperature 100° F.). One naturally thought of some septic condition, but there was no distension of the abdomen, and the wound was sweet. A dose of calomel, followed by a saline purgative, was administered, with the usual result. Next morning she became much more violent, expressed numerous delusions, and could scarcely be kept in bed. From time to time she seemed to become rational, but rapidly became acutely maniacal again. She was absolutely sleepless, and therefore various narcotics were administered—bromidia, paraldehyde, hyoscin, etc., but without any satisfactory result. Her pulse and temperature began to rise markedly; she refused all forms of nourishment, asserting that they were all poisoned, and it was practically impossible to feed her per rectum. That night, the fifth after the operation, her pulse began to fail, and on the following day she died from sheer exhaustion. There was no history of direct hereditary tendency to insanity, but there seemed to be some traces of mental weakness in collateral branches of the family.

My diagnosis was, acute mania following the operation; and in order to confirm this, a post-mortem examination was made, when everything in the abdomen was found perfectly natural, and with no indication of septic infection.

The points of special interest in the case which I have just recorded are, first, its very early development after the operation, occurring as it did on the third day. Howard Kelly reports one case occurring shortly after operation, but the exact time is not given. Most of the recorded cases occurred later, and many of them during the period of convalescence. Of the other three cases I have met with, two occurred in the second week and one in the fourth week after the operation, and all recovered.

The second point of interest in the case is the rapid and fatal issue. I can find no records of any such case, most of those recorded either recovering or remaining permanently insane. Further, most of the recorded cases have been in women who either had well-marked hereditary tendency to insanity, or who had themselves at some previous time been insane. Spencer Wells records two cases of insanity during convalescence after ovariotomy, but both were in patients of lunatic families. Savage, of Birmingham, out of 483 cases of double oöphorectomy, had four cases—three recovered, and one committed suicide six months after the operation. Keith had six cases of insanity in sixty-four cases of hysterectomy. Three of these were acute, three became chronic. Howard Kelly, out of 2000 abdominal sections, had eight cases of insanity. Five recovered completely, two remained insane, and one committed suicide after her return home. In 1000 cases of abdominal section performed by myself, I have met with mental disturbance four times—three times after ovariotomy and once after hysterectomy. All of these patients recovered completely, except the one whose case I have just recorded.

It seems to be beyond a doubt that this accident after an abdominal operation occurs very exceptionally in women of sound mental health themselves, or with a clean hereditary record. Nearly all the cases recorded have occurred in women who themselves have shown some mental instability, or whose family history shows insanity in some form. The question, however, as to its occurrence after ovariotomy is somewhat different. Here an entirely new element is introduced, when the ovaries become the subject of operative interference; and the records of many operators show that removal of the ovaries and of the uterus is productive of various forms of insanity in a much larger proportion of cases than are ordinary operations not involving these structures. This is not difficult to understand. In every phase of ovarian activity, from the period of puberty onwards, a state of mental instability is produced, more or less extreme, according to the constitution and general predisposition of the patient. Disease or even small malformations of these organs produce mental phenomena which may amount to insanity, and occasionally these mental conditions are relieved by removal of the affected organ; and in this connection I should like to record the following case:—

Case 2.—E. C. was sent me, on the recommendation of Dr Clouston, suffering from acute mania at each menstrual period, while between the epochs she was quite quiet and sane. She was so violent when in my ward that she had to be isolated in the padded room of Ward 6 in the Infirmary. After careful consideration of her case with Dr Clouston, I removed her ovaries, during

an intermenstrual period. One of them proved to be somewhat enlarged and cystic. She had no return of her insanity during the years she remained in Edinburgh, and menstruation ceased entirely. Later she went to Los Angelos, in California, and from there she sent me a post-card regularly for two years, during which she remained quite well. During the last five years I have not heard of her.

I only interpolate this case to show the profound influence the ovaries have upon the nervous condition of the patient. This case, however, is just the converse of the previous one, and the opposite of one's usual experience, which is, that removal of the ovaries rather upsets the mental balance than otherwise. Personally, this is the only occasion on which I have removed the ovaries with the object of curing a mental condition, and in this short communication I do not, of course, refer to women who are operated on for any condition during continuous insanity. Many such cases are recorded in asylum reports.

The prognosis as to life in the insanity occurring after operation is always good. Besides my own I have no record of an immediately fatal case.

With regard to the mental recovery, it simply is a question whether the patient has a good personal and family history or not. If not good, the patient is apt to remain permanently insane, and *vice versâ.*

VIII. CASE OF FATAL ŒDEMA GLOTTIDIS OCCURRING DURING PREGNANCY.

By R. Lucas, M.D., Dalkeith.

Cases of œdema glottidis are rare in ordinary practice, and still more so in obstetrical work. This fact has induced me to report this case to the Society.

On the 1st of January of the present year, I was requested to visit a woman some miles distant in the country. She was 42 years of age, and had previously borne nine children, all of whom were alive. She was again pregnant, having last menstruated in the beginning of May. An examination revealed the presence of a living fetus 'in utero.' She had up to this time enjoyed very good health. She complained of a sore throat and some little difficulty in swallowing her food. On examining the throat it seemed perfectly healthy, and the same may be said of the whole pharynx as far as the eye could reach. The patient complained also of an irritating cough, but there was no expectoration. The breathing was natural, pulse soft, and normal. Temperature 99°. On pressing gently over the larynx she complained of slight pain.

I ordered the patient a saline aperient and to remain in bed. On visiting her the following day, I found that respiration was

somewhat accelerated, the inspiration was prolonged, the cough had now a croupy metallic sound. The pharynx was still unaffected in any way. There were no glands in the neighbourhood implicated, but the larynx was now enlarged, and bulging forward. I procured a specimen of the urine and it was quite healthy, and contained no trace of albumen. I ordered calomel to be given, and steam was allowed to permeate the room freely. The following day, 3rd of January, all the symptoms were aggravated, inspiration very stridulous, pulse rapid, small, and thready, temperature 101·6°. The countenance wore an anxious expression, and there could be no doubt all the symptoms of laryngeal obstruction were becoming more pronounced. I explained to the husband that it would be necessary to perform tracheotomy as the symptoms plainly indicated that matters were going from bad to worse. Accordingly, in the evening, having procured the assistance of Drs Whyte and Donald, we drove out to the patient's residence. The breathing was now very much embarrassed, the features somewhat swollen and livid, and it was quite evident that the sooner an opening was made into the trachea the better. This was explained to the patient, but notwithstanding the persuasive eloquence of three medical men, and the entreaties of her own husband, she resolutely refused to allow the operation to be performed. She died at an early hour the following morning.

The one disappointing feature in the case was the obstinate and suicidal conduct of the patient herself in refusing to allow tracheotomy. An examination of the parts after death was declined.

The President, Professor Simpson, Dr Ronaldson, and *Dr J. W. Ballantyne* made remarks, and *Dr Lucas* replied.

IX. PUERPERAL HYPERPYREXIA, WITH AN ILLUSTRATIVE CASE.

By J. Lamond Lackie, M.D., F.R.C.P.Ed.

Hyperpyrexia is well recognised as one of the most serious of complications occurring in the course of many diseases, the mortality, indeed, being as high as 84 per cent. From Bryant's most exhaustive paper on the subject, one finds that brain and spinal cord lesions were responsible for 29 per cent. of the cases; that pyæmia and septicæmia were the cause of 17 per cent.; that in 7 per cent. the complication arose in the course of acute rheumatism; while pneumonia, infectious fevers, ulcerative endocarditis, tuberculosis, heat stroke, etc., were the cause of the remaining of the hundred cases recorded.

One is bound to distinguish between those cases in which the hyperpyrexia is of what is known as the pro-agonistic or prolethal type of Wunderlich, and those cases in which the high tempera-

ture occurred some time before the death of the patient and was in itself the direct cause of a fatal issue, or from which the patient recovered.

With the pro-agonistic type of hyperpyrexia most must be familiar, and in obstetric practice it is probably met with most commonly just before death from eclampsia. But, as occurring in the course of a puerperium from any cause, and as being the direct cause of death, or as being the most important symptom, hyperpyrexia must be extremely rare. Pye Smith, of Sheffield, records the case of a young married lady who, after her first normal labour, had for three weeks a temperature from 104° to 106·2°, usually in the morning after a sleepless night. She was of a nervous temperament. Wunderlich says, that after parturition the temperature may reach 107·6°, and in a few days fall to normal without any apparent cause. A case is recorded in which the temperature rose to 110·2° at death, on the fifth day following labour. This case, however, was obviously of the prolethal type, and is comparable to those cases of, for example, fatal eclampsia, in which an exceedingly high temperature occurs just before death.

Beyond these, I can find no record of hyperpyrexia occurring in the course of a puerperium, and I therefore venture to report the following case to the Society, in which exceedingly high temperatures occurred, but the patient ultimately recovered.

Mrs O., æt. 36, with five children, each being delivered with great difficulty by forceps, owing to a contracted brim, went into labour for the sixth time. When called, and on examination, one found the os the size of a five-shilling piece, and it was noted that, as the result of her previous confinements, the cervix had been so torn that to the left and the front the tear extended right up to the fornix and even beyond it. I afterwards ascertained that the patient had been warned that, owing to the condition of the cervix, further pregnancies, or rather labours would be dangerous, since the state of the uterus already so closely bordered on rupture. In due course the os dilated fully, and the membranes ruptured, but the head did not descend. As time went on the pains became more and more feeble, until the patient had ultimately complete inertia uteri. Forceps were therefore applied, and in thirty minutes the child was born dead. The mother did perfectly well and had no abnormal symptom till the end of the fourth day, when she suddenly had a severe rigor. I was sent for, and found that the temperature was 105°. As the vaginal discharge was fœtid, an intra-uterine antiseptic douche was administered, and 15 grs. of antipyrin given by the mouth. In spite of these measures it was found two hours later that the temperature was 109°; the patient was delirious, and the pulse very feeble and so rapid that it could not be counted. The excessively high temperature being

evidently the cause of the patient's alarming condition, ice was procured, and as much of the surface of the body as possible was covered with it, while the temperature was taken per rectum every ten minutes. This gradually fell to 103°, when the use of ice was suspended, but, as is the rule in such cases, the temperature still fell till it reached 99·5°. The patient now seemed much better, talked quite rationally, and expressed herself as feeling quite well. For twenty hours she continued apparently fairly well, the temperature ranging from 100° to 101°. Suddenly she had another rigor, the temperature rose to 110°, and similar treatment as on the night before was resorted to with satisfactory results. This time the patient was quite comatose and apparently dying, but the treatment by ice restored her to consciousness, and all alarming symptoms passed away.

Meanwhile intra-uterine antiseptic douches were being administered every four hours, and per vaginam nothing abnormal could be ascertained beyond the excessive tear in the cervix.

Exactly twenty-four hours from the commencement of the previous attack of hyperpyrexia, I visited the patient, when I found her temperature was 100°, and her pulse 100, but she had a certain amount of restlessness, and especially a wandering fitful movement of the eyes, while she expressed herself as feeling perfectly well. From previous experience of hyperpyrexia, I ventured to tell the nurse that very soon she would have a very high temperature again, and promised to return in half-an-hour I left the house, but had not gone five hundred yards when I was overtaken by a messenger summoning me back. A rigor had occurred and the temperature was 110°; ten minutes it was 112°; the patient was absolutely comatose; no pulse could be felt at the wrist; breathing was stertorous, and one expected a fatal issue at any moment. The patient was packed in ice; 20 grs. of antipyrin were administered per rectum, and an antiseptic douche was given, when there came away a large slough and a large quantity of foul-smelling discharge. The temperature gradually fell to 104°; when antipyretic treatment was suspended, and as the patient was then conscious, stimulants were freely administered both by the mouth and subcutaneously. The temperature continued to fall until the ordinary clinical thermometer recorded nothing at all; but gradually the pulse returned, and became hour by hour stronger, until there were no immediate signs of danger. On the following day the temperature was nearly normal and the general condition was good. The nurse, however, reported that the patient passed no urine per urethram, and that all seemed to escape per vaginam. On examination, a large cervico-vesical fistula was found, so large that it admitted two fingers. As the result of systematic douching the temperature gradually fell, and the patient from that time had no further symptoms and made an excellent recovery.

The fistula was later operated on successfully, and now Mrs O. is quite well.

This, then, was a case in which the dose of ptomaine poisoning from autogenetic infection was so great that on three successive nights the patient had marked hyperpyrexia. It was a case of severe sapræmia, there being no evidence of either septicæmia or pyæmia. These two latter, without any reference to the puerperium at all, are responsible for 17 per cent. of the cases of temperature above 106°, but I can find no record of a case in which an absorption such as occurs in sapræmia was the cause of hyperpyrexia. The symptoms set in on the fourth day and continued from then until the slough separated, resulting in the formation of the cervico-vesical fistula. With regard to the symptoms, I should like to draw special attention to that one which I had an opportunity of observing on the third day, and which indicated the threatening onset of hyperpyrexia: it was the peculiar restlessness, especially of the eyes, and the deceptive expression of 'well-being' on the part of the patient. It has frequently been noted in rheumatism, and in three cases of hyperpyrexia from this cause, occurring at different times, that I had the privilege of watching, while resident in the Royal Infirmary, it was a most striking symptom. The patients announced quite suddenly that they were perfectly well, and that their joint pains had suddenly disappeared, while the chart certainly indicated a temperature in one case distinctly lower than that previously recorded. They had, however, the special restlessness and appearance of doubt as to their surroundings to which I have referred, and within half-an-hour all had temperatures above 106°. I take it that the condition was exactly comparable to the state of my puerperal patient, when from similar symptoms I was able to predict a third attack of hyperpyrexia.

It has been noted that hyperpyrexia is most liable to occur in the hotter months of the year; thus 20 per cent. of Bryant's cases were observed in August, and 51 per cent. in the four months, June to September, leaving only 49 per cent. for the remaining eight months. My case, however, occurred in December, so that the season of the year cannot be said to have had any influence in the production of the complication.

The presence of a separating slough, and that alone, accounts for the condition, though why in this particular case a sapræmia should have caused a temperature of even, on one occasion, 112° one cannot determine.

With regard to the treatment of the case, the cold bath is the most strongly advocated for hyperpyrexia. Of this I had had experience in four cases, the three in the Infirmary to which I have already referred, and one of pneumonia following influenza in private practice. These cases all succumbed. It so happened that to carry out the bath treatment in the case which I have

now recorded was at the moment impossible, and therefore simply packing in ice was resorted to, with happily a good result. By the bath treatment, more gradual lowering of the temperature can be insured; but it involves much more movement of the patient, and probably throws a greater strain on the heart and circulation, than when the patient is not disturbed by the transference from bed to bath, and *vice versâ*. At all events, it is well to remember that in all cases of hyperpyrexia the temperature should be reduced by active measures to only a point midway between the highest recorded and that to which it is desirable it should fall. Experience has shown that after antipyretic treatment is suspended the temperature continues to fall just as much after as during the application of ice or the use of the cold bath.

The case which I have described in some detail must be at least uncommon, and therefore I hope I am justified in bringing it before the notice of the Society.

Dr J. W. Ballantyne remarked on the extraordinary nature of the phenomena recorded so carefully by Dr Lackie. He had in his mind a case of passing puerperal sepsis in which he had noted the same extraordinary feeling of well-being preceding a very considerable rise in temperature such as had been referred to; a small quantity of extremely fœtid pus had escaped from the uterus and the temperature had sunk again to normal; the case had been one of nearly fatal third stage hæmorrhage.

The President, Dr Ronaldson, Professor Simpson, and *Dr W. Fordyce* also made remarks.

X. OBSERVATIONS ON LABOUR, COMPLICATED BY A MINOR DEGREE OF PELVIC CONTRACTION IN PRIMIPARÆ AND MULTIPARÆ.

By James Haig Ferguson, M.D., F.R.C.P. Ed., M.R.C.S. Eng., Lecturer on Midwifery and Diseases of Women, School of Medicine, Edinburgh; Physician for Diseases of Women, Leith Hospital; Examiner in Midwifery, University of Edinburgh.

I shall preface what I have the honour to say to you to-night, by a statement of the case which specially illustrates some of the points I wish to bring before you. I have attended the patient through five consecutive confinements, and her obstetric history is as follows:—

Mrs X., æt. 33, is an exceedingly healthy and apparently well-developed woman, somewhat inclined to *embonpoint*. Her *first* child, a large male nearly 9 lb. in weight, was born in April 1888. The head lay normally in the pelvis, and, as is usual in primiparæ, it had passed through the brim some weeks before the commencement of labour, and it lay in the pelvic cavity when the

first stage set in. I applied forceps, owing to rigidity of the perineum, and to prevent inertia. The child was born without great difficulty, and was alive and well.

The *second* child, a girl between 7 and 8 lb. in weight, was born in March 1890. At the commencement of labour, the head (a normal vertex position) was not through the pelvic brim, but was fixed there. The membranes ruptured early, and as the result of the strong pains the head rapidly passed completely through the brim. The rest of the labour was simple, and forceps were applied on the perineum. The child was healthy and well.

The *third* child, a large male between 8 and 9 lb. in weight, was born two years later (in 1892). The membranes ruptured early, and the head was freely movable at the brim and never engaged, lying transversely with the occiput to the left. The labour pains were strong and vigorous, but they produced no effect on the progress of the head, and ultimately signs of inertia began to manifest themselves, the head remaining loose above the brim, and the cervix fairly well dilated. I tried to apply forceps, but on every occasion they slipped off the head, and unfortunately I had not very efficient assistance. Ultimately I performed podalic version. The head came through the brim with very considerable difficulty. Vigorous suprapubic pressure at last proved effectual, and it slipped into the pelvic cavity with a jerk, and was afterwards easily delivered. The child was dead, and its posterior parietal bone showed evidence of the pressure of the promontory.

Eighteen months later (in 1894) a *fourth* child was born. During this pregnancy I had proposed the operation of induction of premature labour, but the patient was averse to such interference, and I did not insist, as I hoped that, as she was now 30 years of age, her children would be getting smaller (as one knows they do get lighter and less bulky, though longer, after that age), and thus allow of an easier labour. In this, however, I was disappointed, as, though it was again a normal vertex position, the membranes ruptured early and the head did not engage; I managed with difficulty to pull it past the obstruction with forceps. The child (a female) was a large one, nearly 8 lb. in weight, and had a somewhat firmly ossified skull. It was stillborn (pallida), and could not be resuscitated, in spite of every effort.

The *fifth* child (a male) was born in August 1897. There was some doubt as to the exact date when pregnancy began on this occasion, and no very definite data to go upon for the induction of premature labour, which was still strongly objected to. Pregnancy went on to full time, and the same phenomena occurred. The membranes ruptured early, the head (L. O. A. position) did not engage, but lay transversely at the brim, and the labour pains served only to exhaust the patient without producing any effect. I allowed the natural efforts to continue as long as it was safe,

and until the cervix was dilatable. I then applied forceps, with the kind assistance of Dr Arthur Wilson, and pulled the head through the brim very gradually, allowing plenty of time for moulding to occur. The child was still-born, but was easily resuscitated, and did well. It weighed close upon 8 lb.

Now, here is a patient who has had five labours at full time. Her first two labours were comparatively easy, and her last three were all difficult, from disproportion between the head and the brim of the pelvis. All the labours were vertex, and there was no malposition of the head. The heads were all large, but none of them unduly so, or too firmly ossified, at least to any serious extent, and there was no fœtal complication or deformity. The uterine contractions were in all cases vigorous and regular, and there never was any appreciable deviation in the axis of the uterus. The membranes ruptured early in all except the first labour, but the cervix in each case was soft and easily dilatable, and offered no obstruction. The difficulty clearly existed at the brim, and only at the brim, and was due to a contracted conjugate. The pelvis is, in fact, a non-rachitic flat pelvis, and the conjugata vera measures just over 3½ in. The patient gives a history of carrying heavy weights as a child, in the shape of some of her own nephews and neices who were not much younger than herself, and whom she was very fond of carrying whenever she got the chance, and in spite of orders to the contrary.

Why, however, should the first two labours have been comparatively easy, and the last three have been so difficult? Clearly, if we eliminate the causes above mentioned, which were non-existent in this case, this must be accounted for in one of two ways, either that the pelvic contraction is an increasing one, or that the fœtal head is at fault.

It is perfectly clear that there has been no increasing pelvic contraction. There is no osteomalacia, or other disease of the pelvic bones or joints: the patient has no hard manual labour, and is not now in the habit of carrying heavy weights on her head or otherwise; the cavity and outlet of the pelvis are roomy and commodious; the conjugata vera, as we have seen, is alone affected, and there is no asymmetry.

On the other hand, the fœtal head was, in each case, practically a normal one. As we have seen, it was never unduly large or over firmly ossified; and further, the heads of the first two children were in no way markedly smaller than those of the subsequent three, and yet practically no difficulty occurred with them. Unfortunately, I have no accurate measurements of the heads after birth, but there can be no doubt that the head of the first child was quite as large as any of the heads of the subsequent children, and there certainly was no tendency to increase in size of the fœtal head in the successive labours. Probably the fifth

child's head was, on the whole, smaller than those of the previous ones. How, then, are we to account for this apparently anomalous obstetric phenomenon—that the two first labours were comparatively easy, and the three subsequent ones so difficult? One is in the habit of thinking that, given as nearly as possible similar conditions with no complications, maternal or otherwise, and if the fœtal head has shown no disproportion to the pelvic brim in a first labour, no great difficulties are to be anticipated in subsequent labours. Now, this case goes to show that this is not always so. Of course, the character of a labour depends upon many things altogether independent of the size and shape of the pelvis, and multiparæ are certainly more exposed to certain complications which may retard labour than are primiparæ. In Mrs X.'s case, however, no complications existed in her subsequent labours.

I would venture to submit the following explanation:—It is a well-known fact that in a primipara the normal position of the fœtal head in the last month of pregnancy is in the cavity of the pelvis. The head has been forced through the pelvic brim by the firm abdominal muscles and uterus, stretched now for the first time, and the lower uterine segment is greatly distended as a consequence. Now, in Mrs X.'s case, the muscles are particularly strong and well-developed, with very firm abdominal walls, and a short waist. The result was that, in her first pregnancy, the fœtal head was pressed through the brim about the beginning of the last month, and then developed to its full size in the pelvic cavity. In fact, nature herself had acted on the principle on which we act in the induction of premature labour, and had secured the passage of the eighth-month pliable skull through the narrow brim. Such a possibility could only be possible in a comparatively minor degree of pelvic contraction, sufficient to allow of an eighth-month fœtal skull passing through the brim without much difficulty. In this case, when the head passed through the brim, all mechanical difficulty was over. In a justo-minor pelvis, on the contrary, the head can enter the pelvis, but cannot easily pass through, so that dystocia exists during the whole passage of the head. This explanation would, however, hardly account for the all but natural termination of labour No. 2. It is to be noted that Mrs X. was a particularly muscular and firmly built woman. This is shown by the fact that, in the second labour, the fœtal head did not lie loose above the brim, and though not through, it was fixed there. The child was a female, and weighed less, consequently its head was probably a little smaller, and possibly more easily moulded. The uterine contractions were strong and vigorous, as one would expect in a healthy, muscular young woman, the tonicity of whose uterus and abdominal muscles had apparently suffered in no way from her previous pregnancy and labour. The head was, in consequence, subjected to such an amount of pressure, that it gradually

moulded and was driven through the brim, in the proper axis, the rest of the labour presenting no difficulty. In the subsequent labours the head lay loose above the brim, and consequently was not acted on to the best advantage by the pains. Further, the pains were less vigorous than they were in the first two labours, and though there was no pendulous belly, the abdominal muscles were undoubtedly more relaxed. As a result, no moulding of the head took place, and no progress. As the labour went on, the head continued to remain loose above the brim, and showed no tendency to enter the true pelvis by the time symptoms of exhaustion began to manifest themselves. I think I have seen at least one other case exhibiting similar phenomena, and where the above explanation seems the only possible one. I have, however, not had an opportunity of seeing so many consecutive labours in this second case, or of eliminating entirely other possible causes of delay.

Ahlfeld[1] has lately laid down the axiom that forceps should never be applied till the head has entered the pelvic cavity, and should be removed before the head is past the vulvar orifice. With the latter part of the statement I am inclined to agree, but I believe much of the advantage of forceps would be lost if the former part were always acted on. True, one would be only too thankful to have the head in the pelvis in all cases before applying forceps; but I contend that, in many cases, no engagement will take place, and no advantageous head-moulding will occur without the help of forceps, when the head is loose above the brim in a moderately deformed flat pelvis. I am, of course, not referring to the condition of the cervix in relation to forceps in such cases; believing most strongly that the head should never be pulled through a cervix not fully dilated, but that the cervix must, in all cases, first be carefully pushed back over the head. So long as the head is not engaged after the rupture of the membranes, the powers of labour act at great disadvantage, and are comparatively, if not entirely, inefficacious, while none the less exhausting, to the patient. As soon as the head engages, not only do the powers of labour then act with advantage, but the head at once moulds itself in accommodation to the pelvis. In such cases one should secure engagement as quickly as possible, and I believe, in minor degrees of flat pelvis, this can best be effected by an early application of forceps. As Milne Murray[2] has pointed out, the antero-posterior grip of the head in such cases results, not in transverse bulging, but in elongation of the head in a vertical direction. The rationale of forceps in such cases is practically the same as that of version, and forceps is certainly more applicable in slight degrees of contraction. The point is, that once *engagement* is secured in such cases there is no call for hasty delivery. Ample time should be given either by nature's efforts or by prolonged intermittent

[1] "Lehrbuch der Geburtshülfe," 2nd edition, Leipzig, 1898.
[2] *Trans. Edin. Obs. Soc.*, 1887-88, vol. xiii., pp. 206-214.

forceps traction, to allow moulding to take place gradually. Many of the failures and fœtal deaths with forceps are due to a forgetfulness of this fact, that the fœtal head cannot be pulled through the narrow pelvis safely, if at all, until gradual moulding has taken place. Many of us are familiar with the fact that after one man has spent a long time in endeavouring to deliver a fœtus with forceps, and has sent, exhausted and discouraged, for a second practitioner to help him, No 2 often succeeds with apparent ease in delivering the fœtus at once. But the secret of No. 2's success lies in the fact that the previous intermittent traction, followed by a period of cessation while practitioner No 1 awaited the advent of No. 2, has allowed moulding of the head to take place, and consequently of easy delivery. If engagement is not secured early in the second stage, the patient gets exhausted, no progress is made, and the chances of delivering a living fœtus become small, not to speak of the risks to the mother. On the other hand, if the head is engaged early, as is usually the case in a justo-minor pelvis, allow nature to go on as long as it is safe before applying forceps. Given good pains, no insuperable obstacle, and no exhaustion of the mother's strength, nature's efforts all tend to mould the head through the pelvis and render subsequent delivery with forceps, should it be required, all the easier and safer both for mother and child.

Pinard[1] has recently stated that the average weight of infants born to women with contracted pelves is greater than that of those born to women with normal pelves; the reason being, that in deformed pelves the uterus and presenting part are prevented from sinking into the pelvis towards the end of pregnancy, and that labour in consequence, if not delayed, is at any rate not premature, as he seems to think it is apt to be when the presenting part is in the pelvis. In 100 cases of symphyseotomy for contracted pelves he found the average weight of the newly-born child was 3350 grms. (7·4 lb.). If this is the case, a new element of difficulty has to be reckoned with in pelvic deformity for not only is there the contracted pelvis, but the fœtus is above the average size (and apparently the greater the contraction the larger the fœtus). This would clearly chiefly affect multiparæ, if the deformity of the pelvis were such as to allow in the first pregnancy of the fœtal head sinking through the brim in the last month as it does in the normal pelvis, and would tend to make subsequent labours more difficult than the first in such cases. Further observation is however needed on this point.

Franke[2] has made an elaborate analysis of 610 labours with contracted pelves. These cases occurred during a period of

[1] *Ann. de gynéc.*, Paris, Aug. 1898.

[2] "Accouchement spontané et accouchement artificiel dans les bassins rétrécis," *Ann. de gynec. et d'obst.*, Paris, 1895, tome xliii., pp. 34-50.

eighteen months, out of a total of 2512 labours, attended during that period in the obstetrical clinique at Dresden, under Professor Leopold. Out of those 610 labours with contracted pelves—

Four hundred and twenty-four, or 69·5 per cent., were delivered spontaneously; of these, 194 were primiparæ and 181 multiparæ. Forty-nine cases were deducted from this list of spontaneous delivery, as in them the fœtuses were so small as not to count. (Where the weight of the child is less than 5½ lb., and its length less than 19 in., it is so small that minor pelvic contraction does not interfere with spontaneous delivery, and no difficulty arises.) One hundred and forty, or 22·95 per cent., of Franke's cases were delivered by operations; of these, eighty-nine were operated on for pelvic contraction alone, thirty-four being primiparæ and fifty-five multiparæ. Forty-six,[1] or 7·53 per cent., were delivered by the colpeurynter.

Out of 464 cases, therefore, where no complication existed but the deformity of the pelvis, there were 228 primiparæ and 236 multiparæ, almost equal numbers; and it is interesting to note that in those delivered spontaneously, there are more primiparæ than multiparæ (194 to 181), while in those delivered by operations for contracted pelvis alone, there are more multiparæ than primiparæ (fifty-five to thirty four).

Franke found, further, that in forty-one cases, out of the 194 primiparæ who were spontaneously delivered, the head was still movable at the beginning of labour in the upper strait, or above it; in the others, the head was fixed, but whether before or after labour could not be determined in every case, as many cases came under observation for the first time in an advanced stage of labour. All Franke's primiparæ were young and vigorous, the youngest 15 and the eldest 36.

Franke's statistics show that 59·2 per cent. of the deformed pelves were generally contracted, and 27·4 per cent. were simple and rachitic flat pelves. Other statistics (*e.g.*, Gönner and P. Müller) make the flat pelvis the more common.

By far the greater number of Franke's cases which were delivered spontaneously had generally contracted pelves.

A quarter of the women in labour in the obstetrical clinique at Dresden had more or less contracted pelves.

Litzmann[2] found that in 200 cases of normal pelves, including both primiparæ and multiparæ, the head was in the pelvis before labour in 70·5 per cent.

In 222 cases of contracted pelves he only found the head in the pelvis eighteen times, *i.e.*, 8·1 per cent., and in these the entrance into the brim was only partial at the end of pregnancy.

During labour with narrow pelvis the head entered the pelvis before the waters broke in a quarter of the cases, or 21·4 per cent.;

[1] These are not divided into multiparæ and primiparæ.

[2] "Geburt bei Engen Becken," Leipzig, 1884.

and only after full opening of the cervix in more than half the cases, 56 per cent.

Franke's statistics seem to indicate that (at least in his series of cases) more primiparæ than multiparæ are delivered spontaneously in cases of contracted pelves, after eliminating altogether other causes of delay not directly due to the pelvic condition, which one knows are more apt to exist in multiparous labours.

This is no doubt due to the stronger pains, to the early engagement of the presenting part, to the possible absence of any great uterine obliquity, and to the possible smaller size of the child in primiparæ.

It would be interesting, however, to have more statistics as regards labours in the same patient with slight pelvic deformity, for a general classification of a more or less contemporaneous set of cases gives little information in reality, as every patient must be considered individually, not only as regards the pelvic condition, but as to the characteristics of each consecutive labour that she has had, before anything like a useful classification can be made. This cannot so easily be done in hospital practice (where a patient is often only seen once by the physician in charge and is then lost sight of) as in private practice. Possibly, however, opportunities for such observations may be rarer now than formerly, as large families are apparently not so common now as they used to be.

Professor Simpson expressed his appreciation of the importance of Dr Haig Ferguson's communication. It was valuable in calling attention to the necessity of having the records of the histories of successive labours in the same woman, and giving the account of the carefully observed history of one particular patient. He (Prof. S.) was disposed to agree on the whole with Dr Ferguson's explanation of the difficulty of the subsequent labours as compared with the first, but thought that without accurate measurements and weights of the infants it was impossible to eliminate the possibility of there being the usual increase in the successive children. Further it was to be remembered that in multiparæ the muscularity of the uterus was apt not to be so effective as in the first labours, so that *e.g.*, the lower segment at an earlier stage of the labour becomes passively distended and thinned. He hoped Dr Ferguson would have the opportunity in many other women of tracing the causes of the increasing difficulty in the birth of their successive children.

Dr J. W. Ballantyne said that the question of the size and weight of new-born infants was more complicated than Dr Ferguson in his paper seemed to infer. There were modifying circumstances in the state of health of the fœtus itself and in idiosyncracy. It had been thought that the larger infants of women who rested in the last weeks of pregnancy as compared with the smaller infants of the mothers who had to work up to

the very day of confinement were due to the greater nourishment received by the former; but it now seemed more likely that it was simply a case of labour coming on a little earlier in the case of the latter. The infants were smaller simply because they had not lived out their full period of weeks in the uterus. There was also the factor of paternal influence to be taken into account, for it was known that some fathers tended to procreate large infants and some small ones. There was also the well-known fact that some women in the last stages of consumption gave birth to large and apparently well-nourished infants.

XI. NOTES ON TWO CASES OF PERITONEAL EFFUSION, (*a*), TUBERCULAR, (*b*), MALIGNANT, WITH MICROSCOPIC PREPARATIONS.

By Dr W. Fordyce.

Mr President and Gentlemen,—Cases of peritoneal effusion due to local causes are of such interest to the operative gynecologist, that I feel no apology is necessary for making a brief note of the two following cases lately under treatment in Ward 24. The first of these is undoubtedly one of tubercular disease, as you will readily see on examining the specimen I have placed under the microscope. The second I have called malignant peritonitis—because at the time of the first operation, this was thought to be the nature of the case, though it was chiefly with the object of getting an opinion from you as to whether or not it was not more probably also of a tubercular nature that I have ventured to bring the case under your notice.

S. L., æt. 13, was admitted into Ward 24 on February 7, complaining of swelling of the abdomen, and deep-seated pain in the right iliac region and back. The pain had been present for two months, the swelling had been noticed for five weeks. The pain was described as dull and aching rather than acute, not constantly present, but recurring several times during the twenty-four hours, always worse at night, not affected by exertion, and relieved when patient lies on her back.

The swelling first noticed on the right side increased slowly at first, but lately the increase has been more rapid, and the swelling came to occupy a central position.

Family history is good. Father and mother both alive and quite healthy. One brother and one sister died in infancy. The other members of family enjoy perfect health, excepting one sister who suffers from suppurating glands in the neck.

Menstruation commenced in June 1898, it was unaccompanied by pain, regular, discharge though lasting four to five days was always small in amount. There has been amenorrhœa for six weeks. Intestinal and bladder functions normal.

The patient was a well-developed, plump, apparently healthy looking girl. Closer examination, however, revealed a mass of enlarged glands in the neck on the right side, probably tubercular. The pulse was 88, temperature normal, but on one or two occasions after admission, there was a slight evening rise to 99·8° and 100·2°.

The abdomen was uniformly distended, 35½ inches at umbilicus, and generally *painful* on pressure, though not to any marked extent. The physical signs were those of free fluid in the peritoneal cavity.

The vagina was comparatively roomy, and there was a slight leucorrhœal discharge. The body of the uterus was displaced backwards, and there seemed to be a general matting of the pelvic organs, while on the right side and the posterior fornix a hard irregular mass could be felt. *Lungs healthy.* Chiefly by a process of exclusion but also from the slight evening rise of temperature and the presence of the enlarged cervical glands, the case was diagnosed to be one of tubercular peritonitis, originating probably in connection with the uterine appendages as such cases often do.

On opening the abdomen the diagnosis was confirmed. The peritoneum was much thickened so as to be like a cyst wall. There was a large amount of clear straw-coloured fluid, over 200 ozs., free from any flakes of lymph, in the peritoneal cavity. The peritoneum covering intestine, uterus, and appendages was studded with greyish tubercles varying in size from a millet seed to a split pea.

These tubercles were specially numerous over the uterus and appendages which were matted together by a tubercular inflammatory deposit. This exudation was the mass felt in the pouch of Douglas on vaginal examination. There was no matting of the intestines.

After drawing off the fluid, the peritoneum was flushed with a boracic solution and then carefully dried and the abdomen closed.

The fluid was carefully examined for tubercle bacilli, but none were found.

I show you, however, under the microscope a section of the peritoneum excised at the time of the operation. You will see the characteristic granulation tissue of tubercular inflammation and scattered through this are numerous very large giant cells.

I was fortunate to discover a single tubercle bacillus in one giant cell. This section I have placed under the high power. I show you here micro-photographs of two giant cells. The lower of the two contains the bacillus very highly magnified.

The patient made a uneventful recovery, and so far there does not seem to be any reaccumulation of the fluid.

Since writing the above, the patient, I should state, has been in the ward again, and the abdomen has had to be tapped so that the result of the operation has not been so satisfactory as was hoped, a

complete cure often resulting from the opening of the abdomen and washing the peritoneum.

I have seen a case, however, where after operation, the fluid reaccumulated, and after being tapped three times within a month, finally disappeared and the patient got well.

The second case is not so typical and straightforward as the one just quoted.

Mrs G., æt. 28, nullipara, admitted to Ward 24, first on June 6th, 1898, complaining of swelling of the abdomen, which she had noticed for seven months. For one month before admission she had suffered a good deal of pain, but this was probably due to the distension of the abdominal parietes, and was not very marked. Mother died of cancer of stomach. Family history otherwise good. Menstruation had been regular in time and quantity, but there had been gradual increasing dysmenorrhœa, most marked just before the flow was established. Pulse 80, temperature normal or sub-normal in morning, slight evening rise. No bladder or rectal disturbances. On admission the patient had a rather worn and anxious expression, and was somewhat emaciated. The abdomen was markedly distended; this being evidently due to free fluid in the peritoneal cavity. There was slight tenderness on palpation.

On vaginal examination, the uterus was found to the front enlarged and irregular in shape, while through the posterior and right fornices several hard irregular nodules, seemingly in relation to the peritoneum, could be felt.

The abdomen was opened and fluid drained off. It was reddish in colour. No nodules could be seen or felt on the abdominal peritoneum, but both ovaries were found to be enlarged, nodular, and fixed, and evidently the seat of some growth which was supposed to be malignant in its nature. The same growth also involved the pelvic peritoneum.

The peritoneal cavity was flushed with boracic solution, and then carefully sponged. After operation the temperature remained practically normal till patient left hospital in three weeks. A month later, however, she returned, the abdomen, being much more swollen than before.

The fluid was removed on this occasion by tapping through the left flank. Patient remained well after this, and gained steadily in strength and weight till last December, when she first noticed the swelling returning, and this went on increasing till her admission again on January 31st, 1899. With the swelling the pain returned, now much more severe than before; deep seated and stabbing in character, shooting down the left side.

Menstrual function still normal with exception of the dysmenorrhœa she previously had suffered from.

Micturition was now attended with a good deal of difficulty and pain, though not frequent.

Patient's general appearance had not much changed since first coming under notice eight months ago. She states, however, that since the last attack she has lost flesh rapidly and has got very weak. The abdomen, February 1st, is again very distended, and there is a hernia along the line of the first exploratory incision. No nodular masses could be felt through the abdominal wall. On vaginal examination the pelvic tumor was found to have increased considerably in size, it now involves the uterus, and is firmly adherent to the walls of the pelvis.

On February 8th, with a view to cure the hernia as well as evacuate the fluid, Prof. Simpson opened the abdomen along the line of the old incision through the hernial sac. About 350 oz. of deeply blood-stained fluid were evacuated, and the pelvic contents were found matted in some firm new growth. The whole of the peritoneum of the general abdominal cavity was also found studded with small indurated nodules, evidently an extension from the mass in the pelvis.

I have put a section through a nodule of the peritoneum excised during operation under microscope B, and will be glad if any of the Fellows who have looked at the preparation will offer an opinion as to the nature of the pathological change present. It seems to be chiefly a new connective tissue formation, and scattered through this connective tissue are numerous large irregular colloid masses, due, probably, to the agglutination and subsequent colloid degeneration of several cells. I have looked carefully through a large number of sections to see if I could find any direct evidence of tubercular change, *e.g.*, giant cells unchanged, or tubercle bacilli, but have found none. In view of the nondescript character of the specimen, for I have shown it to several pathologists, and no none will state definitely whether the changes indicate malignant disease or not, one is tempted to speculate, if after all the case is not one of tubercular peritonitis, and that here we have a tubercular peritoneum undergoing some inflammatory reaction following on the first operation, and which, according to Manotti and Bariochi,[1] from their experiments on dogs and rabbits, is the most important factor in the cure of tubercular peritonitis following abdominal section. They think that this inflammatory reaction of the peritoneum greatly increases its absorptive power, prevents further infection, vascularises the tuberculous nodules, and finally promotes their absorption and transformation into connective tissue.

There are certain points in the history of the case which favour such a theory, viz., the age of the patient only 28; the absence of any very marked pain such as one would expect to be associated with a cancerous infiltration of the pelvic (and later of the abdominal) peritoneum; thirdly, the slight evening rise of temperature; and fourthly, the seeming quiescence of the

[1] *Arch. f. Gyn.*, Bd. xlvii., H.I.

disease and improvement in the patient's general condition after the first operation. I shall be glad of an expression of opinion from the members of the Society as to the plausibility of such a theory, and to hear if they have come across any similar case in their operative experience.

Dr J. W. Ballantyne thought that the explanation given by Dr Fordyce that the second case was really after all one of tubercular, and not malignant, peritonitis, was possible, although not very probable. It must be admitted that one sometimes met with tubercle occurring as a primary affection of the tubes or ovaries. He had some years ago described (along with his friend Dr J. D. Williams), a case of primary tubercular disease of the tubes with congenital absence of the right fallopian ampulla; the lesions were much more advanced in the tubes than in either the brain or the uterus, and as the menstrual sufferings were of long standing, it was concluded that the process originated in the tubes.

Professor Simpson also made remarks.

MEETING VII.—JUNE 14, 1899.

Dr J. HALLIDAY CROOM, *President, in the Chair.*

I. Captain Patrick W. O'Gorman, M.D., D.P.H., Camb., I.M.S., 16 Chalmers Street, Edinburgh, was duly elected an Ordinary Fellow of the Society.

II. *The President* made a touching reference to the deaths of Dr Moir—the father of the Society—of Mr Lawson Tait, and Dr Coghill.

III. *Professor A. R. Simpson* showed—FŒTAL BONES removed from the bladder from a case of extra-uterine gestation.

IV. *Dr Foulis* gave a DEMONSTRATION on specimens illustrating the connection between the Wolffian duct and the testicle in the embryo.

V. *Dr Keppie Paterson* showed an INTRA-UTERINE FIBROID removed by 'morcellement.'

VI. *Dr Haultain* showed—(*a*) The SEPARATE PARTS OF A DOUBLE MONSTER. It presented transversely, and Dr Webster, who attempted to turn, delivered the legs and trunk of one fœtus. As delay occurred, he was asked to see the patient, and found, as Dr Webster stated, the foot of another fœtus presenting. On passing the hand further up to reach the head, the trunk of the half-delivered

child could be felt attached to another trunk. As it was a suitable case for the Maternity Hospital, it was decided to send her there, where the delivery was accomplished by Dr Underhill after the separation of the trunks. The union was of considerable extent, and embraced almost the entire sternal region.

(*b*) A SMALL DERMOID OVARIAN CYST which gave rise to severe urinary symptoms through its close adhesion to the bladder, and which he had at first mistaken for a vesical growth.

(*c*) A UTERUS successfully removed by abdominal hysterectomy, which contained a myxo-sarcoma about the size of a large orange, and also a sub-peritoneal calcified fibroid. The patient, aged 46, had been treated successfully for severe uterus hæmorrhage by means of the constant current. On this occasion the bleeding was so profuse that immediate operation was deemed necessary to save her life. It appeared as if the myxo-sarcoma was a secondary process in a pre-existing fibro-myoma, though very little myomatous tissue could be seen by the microscope.

(*d*) A LARGE MULTILOCULAR OVARIAN CYST removed in the seventh week after confinement. The operation was a difficult one through the presence of almost universal adhesions. In spite of this, however, and also the removal of the other ovary, which was cystic, the patient continued to suckle her child through her convalescence. This he considered was greatly assisted by the peritoneal cavity being filled up to the brim by 1·40 boro-glyceride solution before closing the abdominal wound. By this means the necessary post-chloroform want of fluid was counteracted.

VII. *The President* showed—(*a*) A FŒTUS AND PLACENTA from an unusually complicated case of labour. The patient for twenty-four hours before her delivery, which was at full term, had had a temperature of 102°, probably owing to fever of an influenzal type. The liquor amnii had escaped a fortnight before the day labour set in. On examination, I was struck by the fact that I could detect no os uteri whatever, though there must have been a small one somewhere, and as the labour pains were very violent, I was obliged to make an artificial os. On getting my fingers inside the cervix I found a hand and a foot presenting, and the uterus tightly moulded round the child, which was dead. I turned with very great difficulty, but without causing any laceration. The placenta was delivered with ease. Immediately afterwards the patient had a severe rigor, and became collapsed. From this state she never rallied, and she died four hours later.

(*b*) A LARGE PHOSPHATIC CALCULUS removed by colpo-cystotomy.

(*c*) A DERMOID SESSILE OVARIAN CYST removed by enucleation.

(*d*) A FIBRO-MYOMA OF THE UTERUS removed by myo-hysterectomy, after Howard Kelly's method.

VIII. TWO CASES OF MISTAKEN SEX IN ADULT LIFE.

By J. Halliday Croom, M.D.

In the current number of the *Revue de Gynécologie*, there is a paper by Neugebauer, in which he recounts fifty cases in which a marriage took place between two persons who afterwards were found to be of the same sex. The article is meant to show the importance of making early discovery of such cases, in order to save the miserable consequences, unhappiness, divorce suits, even suicides, which may follow if they are not recognised and are allowed to proceed in error; and to demonstrate the responsibility which is incurred by a doctor when giving a definite opinion in cases of doubtful sex. That it is by no means easy in all cases, especially before puberty, to determine the sex, is certain; but many of such cases are never brought to the doctor at all. In the great majority of cases, a male is mistaken for a female, which naturally leads to greater difficulty in the matter of examination. Of the fifty cases recorded in the paper to which I have alluded, forty-six were cases in which a man was married by mistake for a woman; only three were cases in which a woman was married as a man. In the remaining case it was said that one of the patients was hermaphrodite.

Foreign medical literature abounds in copious records of cases of this sort, but, so far as I know, few cases are met with, or at least are recorded, in this country, and a record of two cases of mistaken sex occurring in members of the same family, and which is perfectly authentic, cannot be without interest and value to the members of the Society.

Two supposed girls, aged respectively 19 and 21, were brought to me by their mother with simply the history that they were both quite well but that they had never menstruated. One was at once struck with the appearance of the patients. The features were distinctly of the masculine type; the elder had a budding moustache, and their figures lacked the rounded contour of the female form. They were dressed in fashionable female costume, and when they spoke the voice was loud and harsh. The years which they had reached fully justified a suspicion of some abnormality, and therefore I suggested an examination under chloroform, which was agreed to, and carried out by myself, in conjunction with Dr Lackie.

On examination, both presented the same peculiarities. The hair of the head was unduly short for girls; the mammæ and nipples were small and undeveloped, so that the chest wall was flat and entirely masculine. In the case of the elder, the skin over the sternum was slightly hirsute. On examining the abdomen one noticed that the pubis was well covered with hair, and that this extended upwards towards the umbilicus; but it was on examining

the external genitals that the most remarkable features were found. Each had a representative of the penis, about 1 inch long, and at the base of this, on the lower surface, the meatus urinarius was discovered. The penis was covered by skin, and on retraction of this a small glans was observed, but there was no evidence of a urethra in the organ. Behind this, which appeared to be simply an hypertrophied clitoris, there were two apparently somewhat large labia majora, but on separating these, no vaginal orifice could be found, and on a more thorough examination it was made out that each labium contained what was evidently a small testicle. The labia were, therefore, simply an incomplete scrotum, it having a marked cleft between the two sides, and the raphe being completely hidden unless the 'labia' were separated.

An examination was made per rectum; no trace of a uterus or appendages could be detected, but the prostate gland, fully developed, was easily felt.

The patients were, indeed, cases of hypospadias, with malformation of the penis and the scrotum, and the fact was brought home to me that I was dealing with two men, and not with two women, as was supposed when, an hour before, they came under my care.

One is inclined to regard all such cases as these in the light merely of curiosities, and it is as curiosities that most of them are recorded. To the teratologist, now that teratology is being recognised as a science by itself, they are undoubtedly of great interest and importance; but one also learns by experience that in the field of practical medicine they raise difficulties and produce complications of no small magnitude.

Neugebauer speaks of the grave responsibility which rests with one who fails to recognise the seriousness of mistakes made in determining the sex of a child at birth. He alludes to two melancholy cases of suicide which arose from such mistakes.

One of the cases which he cites is that of a woman of 50, who had been married at the age of 21, and divorced from her husband ten years later. The husband's plea was not only that he could not consummate his marriage, but that his wife made him a source of ridicule to his acquaintances because of her conduct towards other women. It was discovered at last that this supposed woman was in reality a man, the subject of hypospadias; and thereupon she claimed from her brother a share of the patrimony. Against this claim the brother entered a counter-plea against the newly discovered brother of seduction of his wife. Surely a sufficiently complicated and involved question!

Dailliez records a remarkable case in which proceedings on the part of a husband for procuring a divorce were carried on during twenty-two years before it was finally decided that the supposed wife was not a female at all. Three medical experts first examined the supposed woman and declared her positively to be a female, while two other doctors asserted that she was a male.

A new plea was instituted some years later by the husband, and another examination was ordered by the Court. This time a woman was entrusted with the examination, and she declared that the subject was neither a woman nor a man. The matter was then referred to the ecclesiastical tribunal at Rome, and a consultation between a lawyer and a theologian resulted in the decision that the marriage had better be annulled. Even this judgment was appealed from, and it was only in 1888, twenty-two years after the question had been first opened, that it was finally decided that the woman really was a man, with peno-scrotal hypospadias.

A midwife was accused and found guilty of having coitus with a young woman, 19 years old, who became pregnant thereafter. Her plea was that she had adopted that procedure in order to right a displacement of the uterus, of which her patient was the subject. On examination she was found to be a male pseudo-hermaphrodite.

The recorded cases in which females have been mistaken for males are much fewer in number but sufficiently appalling in their consequences. The history of Anne Grandjean, fully recorded by Arnaud, and quoted by Neugebauer, is very sad. She was born in 1732, and was brought up as a girl, till, at the age of 14, on the advice of a father confessor, she was recognised as a boy and called Jean-Baptiste. At the age of 32 she married a woman. The marriage was sterile. The wife was distressed at the imputations which the sterility of the marriage cast upon herself. Some one who had known her husband in childhood told her he was a hermaphrodite, and, on the advice of another confessor, she caused inquiry to be instituted, with the result that Jean-Baptiste was condemned to the most painful and degrading punishments that could be devised for a human being.

Although it is difficult to imagine how, in a properly cared-for child, such a mistake could arise with the organs so obvious as they were in this case, yet, in my particular cases, as they as children were brought up abroad, in charge of coloured nurses, the cause of the error in sex is more easily accounted for.

In my own cases recorded above, there were, as may be imagined, extremely difficult complications to be adjusted. It was discovered upon inquiry that the relations of my patients towards their girl friends had been peculiar. They much preferred the society of girls to that of men, and one confessed to feelings of sexual excitement when sleeping with female cousins.

Legal complications were not easily arranged. Many formalities had to be gone through; questions with regard to their father's will had to be adjusted, and new names had to be given to the young men, who donned men's attire, left this country, and are now pursuing useful avocations in the far East.

Dr D. Berry Hart made remarks.

IX. THE TREATMENT OF ECLAMPSIA BY INTERCELLULAR INJECTION OF SALINE FLUID.

By ROBERT JARDINE, M.D., etc., Physician to the Glasgow Maternity Hospital.

WITH the exception of concealed accidental hæmorrhage and rupture of the uterus, there is no more fatal complication met with in midwifery work than eclampsia. It would serve no good purpose to discuss the various theories which have been advanced from time to time, as to the cause of the convulsions. I think I am safe in saying that the fits are caused by a toxæmia of a urinary nature, or in other words, toxic substances are retained in the blood which should have been excreted by the kidneys. The liver seems involved in some way, but how, I do not know. The kidneys are unable to overtake the extra work thrown upon them, and the poison, whatever it is, gradually accumulates in the blood until the nervous centres are seriously affected, and an explosion takes place in the form of convulsions. The presence of albumen in the urine merely indicates that the kidneys are sadly out of gear. The line of treatment which I have been trying for some little time now is based upon the above suppositions.

If we have a toxic substance circulating through the system, there are three main channels through which it may be got rid of, viz.: the bowels, the skin, and the kidneys. All these channels are useful, but the most useful one will be the one belonging to the system, which is chiefly involved. For instance, if the toxæmia arise from absorption through the bowels, as with a fæcal accumulation, the bowels must be thoroughly cleared out. In the case of eclampsia, it is the urinary system which is chiefly at fault, and this is the channel through which we should strive to get rid of the poison. At the same time, the two other channels must not be neglected. The value of purgation, diaphoresis, and diuresis in the treatment of eclampsia has long been recognised, and if a case is taken in hand before the onset of the convulsions, the administration of drugs to bring about these three actions will in nearly every case prevent the fits. When the fits have come on, purgation and diaphoresis can usually be brought about by means of croton oil (though by the way it is a very uncertain drug in these cases), enemata, etc., and a hot pack or bath. To get the kidneys to act is another story. The patient very often cannot swallow, and if she can, diuretics by the mouth are slow in action, and time is of the utmost importance. It is with the idea of getting the kidneys to act freely and as quickly as possible that I have adopted the method of giving large saline injections into the subcutaneous tissues of the body. The record of the following cases proves, to my mind at least, that it is a method of treatment worth carrying out.

The solution I first used consisted of 1 part bicarbonate of

potash, to 3 of common salt, 1 dr. to the pint of sterilised water at 100° F. The bicarbonate of potash was added on account of its powerful diuretic action. Potash when thrown directly into the blood is a powerful poison, while soda is not. Unfortunately, the diuretic action of the soda salts is feeble compared with that of the potash ones. In none of the cases have I seen anything that would lead me to suppose there had been any poisoning. In the last seven cases the potash has been increased to equal parts with the common salt. That amount may be somewhat risky, but I cannot say we have seen any symptoms pointing to that, and perhaps it would be well to lessen the strength of it. Prof. Stockman has advised me to try acetate of soda, and I intend doing so. It is not so good a diuretic, but is non-poisonous. Eclamptic patients take such large doses of exceedingly poisonous drugs, such as chloral, veratrum viride, and morphia, that they seem proof against anything.

The apparatus used is a simple one of an aspirator trocar and canula, a few feet of tubing, a test-tube shaped filler, and a piece of adhesive plaster. The whole can be sterilised. Messrs Gardner & Son have fitted one in a case for me. The injection may be made into any part of the body where the tissues are loose. Under the edge of the breast is a convenient place before delivery, and the lax abdominal wall after. I have run a pint in in four minutes. Absorption begins at once and it will all have disappeared in fifteen or twenty minutes. In cases of severe hæmorrhage this method of injection is a most valuable one. Common salt solution, 1 dr. to the pint, should then be used. In several cases I have injected from 3 to 4 pints in practically pulseless women, and have brought them round. In upwards of fifty injections we have never had an abscess form or the puncture give any trouble. There is some pain for a little, but it subsides as the tension disappears.

I shall now give notes of the cases treated by myself and my colleague, Dr Black. From them you will see that we have tried various drugs to control the fits.

Case I.—Mrs G., i-para, æt. 27, six months pregnant, admitted in a dying condition. She had had eight fits. There was slight œdema of the legs and face. The urine was very bloody and became nearly solid on boiling. Pulse very feeble.

Treatment.—Chloral and bromide and $CHCl_3$. Ether was given hypodermically, as the pulse was almost imperceptible. The os admitted one finger, but the cervix was very rigid. I tried to dilate it, but could not. Nearly two pints of a normal saline solution were injected into the areolar tissues of the right axilla. This improved the pulse, but she gradually sank and died, undelivered, four hours after admission. She had four fits after admission, making twelve in all. This was the first case in which I

used the injection, but there was no bicarbonate of potash in it. It was a hopeless case. At the post-mortem the kidneys were found markedly hyperæmic.

CASE II.—E. M., i-para, æt. 17, admitted 31st August 1897, 9·15 P.M., delivered at 10.30. Child, female, alive, weight 6 lb.

She was first seen at home by a nurse. A fit came on before the nurse had time to examine her.

Previous History.—In infancy she had had scarlet fever followed by dropsy, and when five years old she was said to have had dropsy again. For the last three or four weeks swelling of the legs had been noticed.

When Dr Barker, the out-door surgeon, saw her, she was having a fit. He gave her $CHCl_3$, and had her removed at once. The os was nearly fully dilated. Half-an-hour later the head was almost on the perineum. She was given $CHCl_3$, and delivery was effected by forceps. Post-partum bleeding was encouraged, but very little came, and what did was very dark in colour. An enema of 60 grs. bromide and 30 of chloral was given. She had a seizure two hours later, and she became very restless. Two drs. bromidia were given by the rectum. She became quieter, and dozed during the night. The bowels were freely moved. There was very little urine passed; specific gravity, 1026; considerable albumen.

1st September.—She looked very dull, and could hardly be got to take any nourishment. She had three slight and one severe fit during the afternoon. For the latter she was given $CHCl_3$. At noon, 2 drs. bromidia were given by the rectum, and the same later in the afternoon. Towards evening a good deal of throat rattle was observed. She passed a fairly quiet night, but would not drink much, and the urine was very scanty. Pulse has all along been about 120, of high tension and regular.

2nd September.—She was very drowsy; pulse now about 130, irregular and intermitting. The albumen was less, but there was very little urine being passed. She would drink scarcely anything.

In the evening she was very drowsy and could scarcely be roused. The skin was very dry, and the pulse was markedly intermittent. At 9·30 P.M., 20 minims tinct. verat. virid. were given hypodermically, 20 oz. saline solution injected into the areolar tissue of the left axilla, and the patient put into a hot wet pack. Before half the saline solution was injected, she became perfectly conscious, and drank freely of imperial drink and milk. In an hour and a half the pulse-rate had fallen 30 beats, and in another hour 10 more, and was quite soft and steady. She passed a fairly good night, and drank freely.

3rd September.—She was much better; had drunk in all 100 oz. of milk and imperial drink. The urine had increased markedly,

but it could not be measured, as some was lost with the motions. Pulse, 96, regular, high tension.

4th September.—In last twenty-four hours, 96 oz. of urine were measured besides what was passed with two free motions. Next day, 100 oz. of urine were collected; albumen still present.

On the 7th she developed a dry pleurisy in the right side, above the liver. The friction disappeared in four days. By the 18th she was very well, but anæmic-looking.

CASE III.—Mrs B., i-para, æt. 28, seven months pregnant. When admitted at 5 P.M., she was in a drowsy condition, alternating with frequent periods of extreme restlessness. She had been having fits hourly since the morning. She had three shortly after admission. Her pulse was of high tension, 130 to 140. Fifteen minims tr. veratrum viride were injected hypodermically, and within half-an-hour the pulse-rate fell to 110. For three hours it remained slower than this. The os was only slightly dilated. Four hours later the os was in nearly the same condition. Under $CHCl_3$ dilatation was effected by means of Hegar's dilators and the fingers, and the child was delivered with forceps. It was still-born. A pint of saline was injected into the right axilla immediately after delivery. The pulse was now 130, but of low tension. The urine became solid on boiling.

She remained semi-comatose for forty hours after delivery. During all this time there was constant spasmodic movements of the right leg and of both eyeballs. She was freely stimulated with brandy every hour, and given a diuretic and milk. In the first and second twelve hours only 14 oz. and 15 oz. of urine were collected. Early on the morning of the second day she became collapsed. Hypodermics of strychnine and ether were given, and hot fomentations applied over the heart. At this time her pulse was 144, and very feeble. During the third twelve hours 17 oz. of urine were collected. I again injected a pint of saline into the left axilla, with the result that during the next twelve hours she excreted 69 oz. of urine. During each consecutive twelve hours 115 oz., 63 oz., 60 oz., 54 oz., 70 oz., and 60 oz. were collected. Over and above these amounts, a good deal was lost with the motions. The albumen quickly lessened in amount. The first three specimens of urine drawn off after injection were quite milky in appearance from urates, which remained suspended, and did not deposit as urates usually do, although we kept the specimens for several days. This may have been due to the large amount of albumen present. In all the other cases the urine was in the same condition, but I do not remember ever noticing it in cases which were not injected.

She made a slow recovery.

CASE IV.—Mrs D., i-para, æt. 22, six months pregnant. She

had had headaches daily for about six weeks. Her urine had been high coloured for two months, and scanty for the last month. During the night of 13th May her headache had become very severe, and vomiting had come on. About midday on the 14th she had a fit, and a second one about 2 P.M. She was brought to the hospital about 9 P.M. There was very little œdema of the legs. There were no uterine contractions, but the os admitted one finger. The fœtal heart was audible. The urine became almost solid on boiling. An enema was given, and just as it began to act she was seized with a very violent convulsion. After it passed off she was drowsy, but not unconscious. Her pulse was 130, and of very high tension. I at once gave her a hypodermic of tr. veratrum viride (15 minims), and injected a pint of saline into the right axilla. The pulse-rate fell 15 beats in half-an-hour, and came down to 90 in a few hours. The bowels were thoroughly cleared with croton oil. She passed a fairly comfortable night, except for headache. She was given some brandy and put on a diuretic mixture and milk. Twelve ounces of urine were collected in the first twelve hours, but a great deal was lost with the motions. It was thick and milky, and did not deposit the urates. There were some hyaline and granular casts, but no blood in it. The albumen had not diminished much.

Next day she was feeling comfortable, and passed over 60 oz. urine. During the next two days she passed 130 oz. and 210 oz. The albumen was lessening. She kept well, and passed large quantities of urine until the 21st, a week from the first seizure, when labour came on, and a dead child was born naturally. It had been alive until the labour came on. She had three doses of chloral to relax the cervix, and $CHCl_3$ was administered towards the end of the second stage.

During the puerperium the diuresis continued, and the albumen disappeared. She made a normal recovery.

CASE V.—Single, i-para, æt. 23; full time; twins. Her previous health had always been good. Six weeks ago her feet and ankles had become swollen, and her face puffy in the mornings. Her father was a twin.

Her pains began on the 16th, and she was seen by two students, who found the os slightly dilated. They gave her an enema, which cleared the bowels thoroughly. On the morning of the 18th two nurses saw her about 9 A.M., and found a child had been born before their arrival. Her friends stated that she had had a fit just as the child was coming into the world. The abdomen was still very large, and a second child was diagnosed. When the resident arrived he found her in a fit, so he gave her $CHCl_3$, and had her removed at once. On admission at 11 A.M. a hypodermic of morphia (half a grain) was given, and the second child delivered by forceps. The child, a male, like the

first, was alive. They weighed 6 lb. and 6½ lb. respectively. A large double placenta, partially attached, but with distinct sacs, was expelled along with considerable clot in about ten minutes. It weighed 2½ lb. A very severe post-partum hæmorrhage came on. An intra-uterine douche of sterilised water (116°) was given, and ergotin hypodermically. The pulse became almost imperceptible. Twenty minims of ether and one-fortieth grain of strychnine were given hypodermically, and over 2 pints of saline solution were run into the rectum, and 1½ pint into the right infra-mammary region. The pulse improved, but was still very rapid and weak (175). A second hypodermic of ether was given, and 2 oz. of brandy by the rectum. The foot of the bed was raised. She was given 2 drs. of brandy by the mouth every hour, and as much milk and soda as she could drink. The pulse gradually improved. Four and a half ounces of urine were drawn off in the evening. It contained blood, and was heavily loaded with albumen.

The following amounts of urine were measured during the next four days, besides what was lost with the motions—viz., 109½ oz., 149½ oz., 92 oz., and 83 oz. Her pulse remained about 120 for a considerable time.

She made a fairly good recovery.

In my clinical remarks during the delivery I said I hoped she would bleed, but I did not count on having to cope with such an alarming hæmorrhage. In my experience of eclampsias, which has been a fairly large one, I have only seen one other case of post-partum hæmorrhage, although many of them have been under $CHCl_3$ for a long time, and the uterus has purposely been left to relax if it would. In this case the twin pregnancy was the cause. I was thankful that morphia had been used instead of veratrum viride: I feel sure the depressing action of the latter would have added a very grave risk, and perhaps have caused her death.

CASE VI.—Mrs D., æt. 27, i-para, treated by Dr Black. This patient was sent into the hospital by Dr Barras. She afterwards stated that for the last month she had noticed her legs and feet swollen, and her face markedly so in the mornings. She had frequently noticed dark spots before her eyes, and at times her vision had completely failed for a few seconds. She had also suffered from severe cramps in her fingers.

On admission at 1.30 P.M. on January 1st she was just recovering from a fit which she had had in the ambulance waggon. This was the fourth fit since 7 A.M. She had been unconscious from the first seizure. Chloroform was at once administered, and Dr Black sent for, but before he arrived she had another fit. As the os was sufficiently dilated, forceps were applied and delivery effected. The child could not be resuscitated. Immediately after

delivery, slightly over a pint of saline fluid was injected into the right axilla and a hot pack applied. After this she had a slight seizure, and as she seemed restless, ½ gr. of morphia was given hypodermically. She fell asleep and did not waken properly until next morning. She had no recollection of what had happened.

A catheter specimen of urine drawn off on admission was found to be almost solid with albumen and to contain a large quantity of blood. The albumen as registered by Esbach's albuminometer come to about ½ in. above the U mark. Granular and epithelial tube casts were also present. The urine drawn off after the saline injection was thick with urates which remained suspended.

Twenty-four hours after admission she regained perfect consciousness. She was drinking large quantities of milk. The amount of urine could not be ascertained, as the bowels had moved freely several times. During the second day 68½ oz. were measured, but as the bowels were moved six times, there must have been a great deal more excreted. The blood and albumen were both rapidly lessening. She made an uninterrupted recovery, but there was still a trace of albumen in the urine on her dismissal on the fifteenth day.

CASE VII.—Mrs K., iv-para, æt. 30, eight months pregnant. She was sent in by Dr Macpherson of Cambuslang.

Her former pregnancies and labours had been normal. During the present pregnancy she was quite well until a month ago when she had an attack of influenza, which confined her to bed for two or three days. On Monday the 24th February she began to suffer from headache, and on the following day swelling of the feet and hands and face came on, and this has since gone on increasing. On March 3rd, at 6.30 A.M., she was seized with convulsions. The fit lasted two or three minutes. She had a second fit, half-an-hour later. She was seen by Dr Macpherson, who gave her ½ gr. of morphia hypodermically, and drew 6 oz. of blood from the left arm. Up to the time of admission at 11 A.M., she had no more fits. She was lying in a lethargic condition with contracted pupils. She could be roused with a little difficulty. She was a stout, plethoric woman with a ruddy complexion. There was well-marked œdema of her legs, arms, face, and trunk. The puffiness under the eyes was very marked, and the right eyeball was very prominent. We supposed this might be due to œdema of the cellular tissue of the orbit, but as the protrusion did not lessen afterwards, there must have been some other cause. She afterwards stated that it had always been so. The ophthalmoscope revealed nothing abnormal in the eyes, except œdema of the retinæ. 8 oz. of urine were drawn off. It was loaded with albumen. The uterine fundus reached half-way between the

umbilicus and the xiphi-sternum. There were no contractions going on. The os admitted one finger. The fœtal heart sounds were distinctly heard to the right and below the umbilicus. 24 oz. of saline solution were injected into the right axilla. It took exactly four minutes to run it in. A dose of calomel and jalap was given and imperial drink and milk ordered, but she could not be got to take much. At 6.30 P.M., when the catheter was being passed, she had a fit which lasted about one minute. She was given a dose of chloral and bromide by the rectum. Only 4½ oz. of urine was obtained. It was thick and muddy, and the urates did not deposit on standing.

About 9.30 P.M. an enema was given, as the bowels had not acted. Thirty ounces of saline fluid were then injected into the left axillary tissues and the patient was put into a hot pack for half-an-hour. At 11.30 P.M. 30 grs. of jalap were given and 1 dr. of bromidia. She slept fairly well and drank in all 18 oz. of milk and imperial drink, but she only passed 5½ oz. of urine. She had perspired pretty freely after the hot pack.

In the morning she was fairly comfortable. The os was found to be dilating, but she felt no pains. About 7 P.M. she was delivered of a live female child 3½ lb. in weight. Her labour was practically painless and she had no threatenings of convulsions. Her puerperium was normal. The temperature never rose above 98·4°. She went home on the tenth day.

The following are the quantities of urine passed during the puerperium—

March 4th,	10 A.M.	to March	5th,	10 A.M.,	27 oz. and 3	motions.
„ 5th,	„	„	6th,	„	25 oz. and 5	„
„ 6th,	„	„	7th,	„	53 oz.	
„ 7th,	„	„	8th,	„	134 oz.	
„ 8th,	„	„	9th,	„	37 oz. and 2	„
„ 9th,	„	„	10th,	„	68 oz. and 5	„
„ 10th,	„	„	11th,	„	66 oz.	
„ 11th,	„	„	12th,	„	60 oz. and 2	„
„ 12th,	„	„	13th,	„	50 oz. and 2	„

I am indebted to Dr Carstairs Douglas for the following careful analysis of three specimens of urine and one of the blood.

Blood, R.B.C. = 4,000,000 per c.mm.
Leucocytes = 15,000 (slight leucocytosis often seen in pregnancy.)
Hb. 78 per cent.

The corpuscles are normal in size and shape.

Urine (i.) before saline injection—Deep sherry colour, acid, sp. gr. 1020, albumen abundant, creatinin plentiful. Sugar (?) It reduces Fehling's solution, but this is possibly due to the urates and creatinin; no bile; no acetone; indigogens normal, urea 1 per cent.

low; uric acid, ·087 per cent. (higher than average of health). (ii.) After saline injection—Urine thick, muddy brown, due to copious deposit of urates, very abundant, sp. gr. 1032, acid, albumen plentiful; a few tube casts and red blood cells; no acetone; urea 1·4 per cent. (rather low); uric acid, 0·15 per cent. (very high, nearly double that before the saline injection). There has apparently been a great washing out of uric acid by the saline. (iii.) One day after delivery—Urine clear, amber, and more limpid, mere trace of albumen, urea 1·7 per cent. (nearly normal); uric acid ·028 (distinctly lower than normal).

It will thus be seen that there was a great increase in urea, and markedly so in uric acid, immediately after the injection. The diuretic effect was not nearly so marked in this case as in the others, but even in it there must have been a great clearing of the system. In the case before this the diuresis was not as great as in some of the others. You will notice that in practically all the cases in which morphia was used nothing like so much urine was excreted, and in two of the fatal ones to be related this was markedly the case.

Case VIII.—A. W., single, i-para, æt. 19, seven months pregnant. This patient was sent into the hospital by Dr Morton, with the history of having had fourteen fits. She was in a semi-comatose condition, and could not be roused to speak. There was slight œdema of the feet. Her pulse was 130, and thready. The os was beginning to dilate. The urine was loaded with albumen.

At 2 A.M. 30 oz. saline were injected into the right infra-mammary region, and a large dose of calomel and jalap given. She was put into a hot pack, but did not sweat at all. In two hours time the os was dilated, and I delivered with Milne Murray's forceps. The fœtus was commencing to macerate. After delivery 24 oz. more saline were injected into the left axillary tissues.

She remained semi-comatose for nearly two days. She could be roused and got to drink, but would not answer when spoken to When she became conscious she said she had no recollection of anything since two days before the seizure. In the first twenty-four hours she passed 30 oz. urine and 5 motions; in the second, 90 oz. and 2 motions; in the third, 145 oz. and 1 motion; in the fifth, 83 oz.

Her recovery was uneventful. She had no fits after admission. The urine was free from albumen when she was dismissed on the tenth day.

The urine was examined by Dr Carstairs Douglas, and the following is his report:—(i.) Urine before injection—Opaque, light yellow, highly turbid from urates, albumen abundant; urea not estimated owing to smallness; uric acid 0·101 per cent. (note uric acid is distinctly above average). (ii.) Urine shortly after injection—Opaque, light yellow fluid, loaded with urates and

albumen, moderately acid, no blood, bile, or acetone; turns Fehling's solution reddish purple, but does not reduce it; urea 1·6 per cent. (rather low, especially as urine was probably concentrated); uric acid, 0·112 per cent. (distinctly above average, increased since injection). (iii.) Urine twenty-four hours later—Almost clear amber, acid, trace of albumen, no effect on Fehling's solution; urea 2·4 per cent. (distinct rise); uric acid 0·0217 per cent. (marked fall below the average).

CASE IX.—Mrs B., ii-para, æt. 27, seven months pregnant. She was admitted in a semi-comatose condition. She had had eight fits. For a fortnight the feet and legs had been swollen, and she had vomited a great deal. A doctor had seen her and prescribed for her. There was marked œdema of the whole body, the conjunctivæ being also œdematous. There was great œdema of the lungs. She had the most œdema of any eclamptic patient I have ever seen. About 2 oz. of very bloody urine were drawn off. It became solid on boiling. Her pulse was 104 and very tense. She was not in labour.

We drew off about 6 oz. of blood from the median basilic vein, and injected 40 oz. of saline fluid into the axillary tissues. She was then put into a hot pack, and a doze of calomel and jalap given. In less than an hour she had a fit. We then gave her ½ gr. morphia hypodermically. In three hours she had a second fit followed by another in twenty minutes. A ¼ gr. of morphia was now given. Her pulse was 118, and weak. There was no recurrence of the fits, but she vomited a great deal of a dark fluid, evidently partly digested blood. Nutrient enemata and brandy were given. She was very comatose.

Twelve hours after admission the os was beginning to dilate. I therefore dilated forcibly, sufficiently to get forceps in; and, as the child was dead, we perforated the head to lessen it. The cervix was somewhat torn, but there was no hæmorrhage. What little blood came was very dark in colour, as it usually is in eclampsia. Thirty ounces of saline were run into the tissues of the abdominal wall. Only 2 or 3 oz. of urine were excreted in the twelve hours, and it was very bloody. In the evening, eight hours later, she was still deeply comatose, and as her pulse was much weaker, digitaline and strychnine were given hypodermically every alternate two hours. All attempts at moving the bowels by calomel and jalap and enemata failed, with an exception of one very slight motion. Hot poultices were applied over the kidneys.

Twenty-four hours after delivery she was still deeply comatose, her pulse was 140, breathing very bad. The œdema had lessened very much, but the kidneys were not acting. I again injected one pint of saline into the abdominal wall, and the resident, Dr Ketchen, opened a vein to see if it would relieve her, but as it had

no effect, we only drew 4 oz. of blood. We kept on stimulating her, but she died deeply comatose six hours later—forty-four hours after admission.

This was an exceptionally bad case, and we had practically no hope of her from the first. In spite of all our efforts we could not get the kidneys to act. In the forty-four hours she was in the hospital they only excreted 11½ oz. The conditions found at the post-mortem quite accounts for her death.

The post-mortem examination was done by Dr R. M. Buchanan.

The pericardium contained 6 oz. of clear fluid; the pleural cavities were also full of fluid. In both lungs there were areas of pneumonic consolidation scattered throughout the lower lobes especially.

The liver showed nothing abnormal to the naked eye. The spleen was slightly enlarged.

The stomach presented an hour-glass contraction, and contained about 8 oz. of dark fluid, apparently partly digested blood. She had been vomiting this fluid all the time she was in hospital. The fundus of the stomach was intensely hyperæmic, and this condition extended almost to the pyloric end. Numerous small ulcers appeared along the lesser curvature at the pyloric end, and a few larger ones near the œsophagus. Some of the ulcers had a flooring of dark blood, but none of them had red margins.

The intestines were intensely hyperæmic in patches, especially the duodenum and upper part. There was also a patch of the same kind in the rectum. There were no ulcers.

The kidneys were somewhat hyperæmic, but showed no marked disease.

There was nothing abnormal in the brain.

The cervix uteri was torn bilaterally.

The condition of the stomach and intestines looked exactly as if an irritant poison had been administered.

Case X.—Mrs G., ii-para, æt. 26, eighth month. Dr Black's case. This patient was brought into the hospital by the nurses. She had been having severe fits for some hours. She was unconscious on admission. A severe fit came on at once, and this was followed by a second one within five minutes, so $CHCl_3$ was administered. She was a stout woman, rather anæmic-looking, but showed no œdema except in the lungs, where rhonchi were heard all over. Her friends said she was quite well the night before, and had not complained of headache. About 2 oz. of urine were drawn off; it was full of blood, and become solid on boiling. She was given half a grain of morphia hypodermically. The os would admit one finger, and the cervix was dilated with the fingers, and version accomplished. The cervix was torn on the left side by the after-coming head; three stitches were put in it. The child was

dead; it weighed 5⅛ lb. While she was being delivered, 20 oz. of saline were injected into the infra-mammary region, and shortly afterwards another 20 oz. into the abdominal wall.

Before delivery her pulse had been about 100 and very feeble. After delivery it became much feebler. She was freely stimulated with brandy per rectum, and digitaline, and strychnine hypodermically. The pupils were now contracted to a pin-point, and could not react. She lay in a deep stupor until she died, five hours after delivery. There was no urine excreted by the kidneys. There was no post-mortem examination.

It seemed to us that the morphia had a very bad effect in this case. Any one seeing her dying without knowing the history would have said she was dying of morphia poisoning.

CASE XI.—Mrs W., i-para, æt. 27, seven and half months pregnant; admitted May 11th. Patient had had two fits before admission; she was conscious, and gave the following history: Three weeks ago she had had severe headache and vomiting; eight days ago swelling of the legs and feet had begun; all last week, she had had a severe sore throat; she had not noticed any rash. There was evidence of desquamation on the forehead, hands, and feet, and we subsequently learned that two cases of scarlet fever had been removed from the stair she lived in, a few days before. She had had the fever during childhood.

On admission, she was somewhat dazed, with dilated pupils. There was œdema of legs and feet; she still complained of the throat being sore. It was red and injected, and the tongue thickly coated, with red papillæ showing through the coating. She was not in labour. The fœtal heart sounds were distinct. An ounce and a half of bloody urine were withdrawn, and on boiling, it became solid.

The treatment consisted of 20 oz. saline injected into the right mammary region, a dose of calomel and jalap, and an enema, which cleared the bowels. Milk and soda, and imperial drink, were given freely. During the first twenty-four hours she had 8 motions, and the amount of urine could not be estimated; she was sweating freely, the albumen was much less. Next day she passed 46 oz., and the next 73 oz., and the next 126 oz., and 2 motions. There was merely a trace of albumen.

On *May 16th.*—The patient was removed to a private house, as we had no means of isolating her.

May 24th.—She has kept very well since leaving the hospital. The bowels have been kept free with a dose of salts each morning. Her food has consisted of milk diet. The urine has not been measured, but she has been passing plenty of it. On testing it to-day I found there was a considerable trace of albumen, so I put her on a diuretic of acetate and citrate of potash.

May 29th.—Pains began in the afternoon of the 28th, and

labour went on slowly. At 11 A.M. on the 29th, I found the os about the size of a florin. The bowels were thoroughly cleared by an enema, and 10 grs. chloral and 20 of bromide given every two hours. Several doses of this were given after delivery. At 4 P.M., as she was beginning to complain of headache, I gave her $CHCl_3$, dilated and delivered with forceps, a live female child which weighed 3½ lb. There was no post-partum hæmorrhage, but the discharge was free. There was only about an ounce of urine in the bladder; it had a considerable amount of albumen in it.

During the first eighteen hours after delivery, only 12 oz. of urine were excreted, although she had been taking large doses of citrate and acetate of potash by the mouth until delivery. She was put on the diuretic again, and the urine soon increased in amount. She made an uninterrupted recovery, and her child is thriving.

CASE XII.—Mrs M., iv-para, æt. 27, eight months pregnant. This patient was seen by me in consultation with Dr David Christie. He had been called to her after she had had six fits. She had a seventh one while he was in the house, and an eighth before we saw her together. She was deeply comatose, with a very feeble pulse. The face was puffy, but the legs were not much swollen. We learned that she had been complaining of headache and sickness for some time, and that swelling of her feet and legs had been noticed for three weeks. The night before, her headache had been very bad, and she had completely lost her sight for a time before the fits came on. We drew off about 6 oz. of very dark urine. It became solid on boiling.

An enema of 30 grs. chloral and 60 of bromide was given, and a pint of saline run into the mammary areolar tissues. As the os was about the size of a florin, I easily dilated and turned. The child was dead, and both its arms were flexed and quite rigid. Last year I delivered a case of eclampsia, with the child perfectly rigid all over. These are the only cases I have seen this in.

We stimulated the patient freely, but she never responded in any way. She died deeply comatose about two hours after delivery. I had no hope of her from the first.

I have given full notes of all these cases just as they occurred, so that you may be able to judge of the treatment. I think one can safely conclude that the diuretic effect is a marked one. The analysis has shown conclusively that there is a marked increase in the excretion of urea and uric acid, and considering that the urine is tremendously increased after the injection, the amount of urea and uric acid expelled from the system must be very great. Of course it may be maintained that these substances have nothing to do with causing the convulsions, but the presence of large quantities of them in the system cannot be held to be beneficial to the patient, and they are certainly better cleared out. What else may have been carried out, I cannot say. There is just a possi-

bility that the bicarbonate may have a neutralising effect on the poison. If we only knew what the poison was, we might be able to neutralise it by the injection of an antidote, but in the meantime, until we discover what it is we can only use means to get it expelled from the body.

As regards the means for controlling the fits, I was at one time inclined to look upon morphia hypodermically with favour, but I have lost faith in it. It is said not to interfere with the action of the kidneys, but I think it does. In Case IX it did so, I believe, and in Case X it seemed to be the cause of death. In the others in which it was used, the diuresis was not nearly so marked as in these treated either with chloral and bromide, or tr. veratrum viride. This latter drug is claimed by some to be a specific, but I cannot subscribe to that. I have given it a fair trial, and have been disappointed with it alone. Combined with the saline injection, however, it has yielded good results. I am inclined to put most faith in chloral and bromide, combined with saline injection. As to the obstetric part of the treatment each case must be judged on its own merits. If the labour has commenced, I think it is well to deliver as soon as possible if the patient is very bad. If labour has not come on, I feel inclined to leave the patient alone, unless the fits recur in spite of treatment.

In the May number of the *American Journal of Obstetrics* there is an interesting paper on 'The Treatment of Eclampsia by Infusion of Salt Solution,' by Dr L. M. Allen of Baltimore. He gives notes of three cases, all successfully treated. The solution he used contained only sodium chloride, the normal saline solution, as it is called.

In the first case the cervix was deeply incised, and delivery effected by version. She was allowed to bleed freely, and then a tampon inserted. Immediately after delivery, 1000 c.c. of saline solution were injected under the mammæ, and nine hours later 1400 c.c. On the second and third days 1400 c.c. were again injected—5200 in all. The bowels were cleared with croton oil and Epsom salts, bromide given, and diuretics and dry cupping over the kidneys. The amount of urine passed in the first twenty-four hours was only 13 oz., and in the second, 33 oz., but on the fourth day it had risen to 130 oz.

In the second case the treatment was the same, 4600 c.c. being injected in three days. In the first twenty-four hours the urine amounted to 14 oz., and in the second, 28 oz., but in the fourth it had risen to 126 oz.

In the third case the cervix was not incised, but dilated normally. Eleven hundred c.c. of solution were injected after delivery. She had a fit about an hour later, when 656 c.c. of blood were drawn from the arm and 700 c.c. of saline injected under the breast. Six hours later she had another fit, and was

again bled to the extent of 192 c.c. Morphine, $\frac{1}{6}$ gr., was given hypodermically, and chloral and bromide by the rectum. The amount of urine for the first twenty-four hours was not recorded, but for the second it was 34 oz., and for the third 120 oz.

He claims that the normal saline solution has a marked diuretic effect, but I cannot see on what grounds he founds that claim. In successful cases the urine always increases by the third or fourth day, no matter what form of treatment is adopted, and considering that his patients were all taking diuretics by the mouth, I do not think the increase in the amount of urine is anything more than one would naturally get without the injection. In nearly all of my cases the increase in amount was very marked from the first.

All his cases were bled very freely, and that assisted by the saline injections contributed largely to the success of the treatment. I have very seldom seen a case which I felt warranted in bleeding to any extent, but in all cases I try to get as free a flow as possible after delivery. I have always been struck with the dark colour of the blood which comes away.

There was one observation I had an opportunity of making in one of my cases, and that was that the child's urine contained almost the same amount of albumen as the mother's.

Of the twelve cases just recorded, four were fatal. The first fatal one was not injected with bicarbonate solution and should hardly be included. The death-rate is a high one, but it must be borne in mind that the majority of these cases came into our hands after they had been having convulsions for hours. In hospital work that is unfortunately the rule and not the exception. The hospital is always a convenient place to ship hopeless patients to. In 1898 we had eight cases of eclampsia to treat. Various methods were used, including large doses of morphia in one, and tr. veratrum viride in others. In three of the cases, viz.: III, IV, and V just related, saline injections were used, and they all recovered, while the other five died. It may be a coincidence, but it is a very remarkble one.

I hope I have not wearied you too much with details, but I want to give an accurate account of what I have observed, as this is the only way in which we can properly judge of the value of any method of treatment. I am deeply indebted to my colleague, Dr Black, for his kindness in allowing me to make use of the notes of the cases with which I was associated with him in treating. I also desire to thank the various residents for their able assistance and admirable reports of the cases.

Dr Haultain had been much interested in Dr Jardine's careful account of his cases. Much, however, could not be said in favour of this method of treatment, as the mortality he had recorded was very much the average mortality of eclampsia in

general. Simple saline injections had been very much praised by some authors, but certainly the results before us did not support this contention. There was perhaps no complication of pregnancy which from time to time had had so many forms of almost specific treatment bestowed upon it, which on practice were unavailing. Doubtless many of the cases stated to have been cured by the methods employed, had done so in spite of the treatment, not by means of it. The successful treatment of eclampsia must rest on a knowledge of its pathology, which at present seemed as far off as ever. It was still a matter of controversy whether it was due to inefficient metabolism or defective excretion, or both. He held, however, that true eclampsia was always associated with albuminuria; other fits occurring during pregnancy and labour he did not call eclamptic. They were due to epilepsy and cerebral hæmorrhage (as seen in a case of his own) and other causes.

Simple saline injections he deprecated from a physiological standpoint, as it raised arterial tension, which was a potent factor in the actual causation of the fit, perhaps the addition of potash, as Dr Jardine ingeniously recommended, might act in a salutory manner, not only by increasing the diuresis but also as a depressant on the circulation, and thus counteract the injurious effect of increased arterial tension from the saline injection. He thought that bleeding by venesection might be employed before injecting the saline for this reason.

The pathology of eclampsia seemed inexplicable, chiefly from two points of view: firstly, from the almost constant disappearance of albuminuria after the death of the fœtus in utero, unless the kidneys were previously diseased (which showed the diseased kidney function to be due to the pregnancy); and, secondly, that future pregnancies were usually normal in their course. This was so in a case of his own where, at the sixth month, aggravated albuminuria and fits caused death of the fœtus, with a resulting disappearance of the albumen, though labour did not occur till a month later. This patient on again becoming pregnant went through quite a normal course, and was delivered easily at full time, not a vestige of albumen having been present in the urine.

Drs Milne Murray, Foulis, Haig Ferguson, Fordyce, MacVie, Donald, and *Keppie Paterson* also spoke, and *Dr Jardine* replied.

MEETING VIII.—JULY 12, 1899.

Dr N. T. BREWIS, *Senior Vice-President, in the Chair.*

I. The recommendation of the Council that, 'in future specimens shown at the meetings may become the subjects of discussion, the time allotted to each specimen to be at the discretion of the President, and the whole duration of the discussion on specimens not to exceed half-an-hour,' was agreed to.

II. Dr Ercole Pasquali, Corso Vittorio Emmanuele, 305, Rome, was duly elected an Honorary Fellow of the Society.

III. The following gentlemen were duly elected Ordinary Fellows of the Society:—Edward William Scott Carmichael, M.B., C.M., F.R.C.S. Ed., 22 Northumberland Street, Edinburgh; and James Wilson M'Brearty, F.R.C.S. Ed., L.R.C.P.E., etc., Greymouth, West Coast, New Zealand.

IV. *Dr Keppie Paterson* showed a SMALL SEQUESTRUM removed from the bladder. The patient, aged 60, had been complaining of bladder symptoms for about a year before consulting him. There was excess of mucus in the urine, but no pus; dysuria was present, especially at the end of micturition. On sounding, a foreign body was detected, which was removed after dilatation of the urethra under chloroform. It proved to be a small sequestrum, separated from the posterior part of the body of the right os pubis, and had left a cavity into which the tip of the little finger could be passed. The patient had suffered from a suppurating gland in the neck for a few months, and as there were also enlarged glands in the right groin, the cause was probably tubercular.

V. *Dr Haultain* showed—(*a*) TUBERCULAR FALLOPIAN TUBES removed from a woman 45 years old, who complained of abdominal distension only. She had had no pain or discomfort of any kind, and her temperature was normal. The peritoneum was studded in its entirety with sago grain nodules, and the cavity was filled with effusion. Since operation, fourteen days ago, there has been a marked improvement in the patient's appearance, and she has already gained 3 lb. in weight. He showed the specimen chiefly as another example of the importance of exploratory abdominal incision, where ascites was present of doubtful origin.

(*b*) UTERINE APPENDAGES removed from a v-para, aged 40, entirely for symptoms of constant pain in the sides aggravated premenstrually. The external appearances of the appendages were normal, and the ovaries looked healthy, but on section it was found that the tunica albuginea was extremely dense, and formed a capsule round the organ, which prevented the distension and rupture of the Graafian follicles, and thus accounted for the severe and persistent pain. The specimen was interesting in regard to the question of conservative surgery of the appendages. To all appearances the ovaries were normal until they were actually bisected after removal.

If physical signs of disease were necessary before extirpation, these ovaries would have been left. As yet, our knowledge of ovarian pathology was too fragmentary, and symptoms alone must sometimes guide us in our treatment. This case was a marked example in support of this assertion, as since the operation the pain the

patient has suffered from for years had been entirely removed, and in the woman's own words, she felt a 'different person, and life worth living.'

VI. *Dr Haig Ferguson* showed—(*a*) A PYOSALPINX WITH AN OVARIAN TUMOUR ON THE SAME SIDE. The patient, Mrs H., æt. 28, had complained of pain in the right iliac region for five days before admission. Four years before she had an ovarian tumour removed from the left side. Two years after she was admitted into Leith Hospital with a retroverted gravid uterus which was replaced, but she miscarried two months afterwards. She has had three children, the youngest six years ago. On admission she was constantly sick, suffered from great abdominal tenderness, with a temperature of 99° F. On examination, a fluctuating swelling was felt on the right side about the size of a cocoanut, and diagnosed as an ovarian cyst. On opening the abdomen there was found to be acute peritonitis, with shreds of flaky lymph, apparently originating from the pelvis. The tumour was adherent in the pouch of Douglas, and on its surface there was firmly adherent a large pyosalpinx the size of a banana, and equally distended throughout its entire length. The tube was doubly ligatured as close to the uterus as possible, and its cut proximal surface, from which pus exuded, was freely cauterised with the actual cautery. The abdomen was washed out with sterilised water, and a drainage tube inserted which was removed on the fifth day. The patient made a good recovery, her highest temperature being 101·4.°

(*b*) AN OVARIAN TUMOUR, with special reference to the patient's after-history. The tumour, an ordinary multilocular cyst, the size of an eight months' pregnancy, was removed without difficulty. Three days after the operation with a normal temperature, the patient developed acute mania, and had to be strapped down in bed. She was treated with hyoscine, $\frac{1}{200}$ gr., hypodermically. She jumped out of bed on the fifth day after operation, and her maniacal symptoms abated on the seventh day. In spite of this disturbance, she made an uninterrupted recovery, and the temperature throughout was normal. The silkworm gut sutures were left for about a fortnight, and the abdominal wound healed by first intention.

(*c*) MYXOMA OF CHORION. The patient from whom this was removed was quite regular in her menstruation, and suffered from no amenorrhœa. For fourteen days before admission she had more or less constant hæmorrhage, but showing no evidence of myxoma in the discharge. On examination a fluctuating swelling, evidently the uterus, extended as far up as a five months' pregnancy. A well-marked thrill could be elicited, but no fœtal heart sounds or uterine souffle could be heard. After dilatation with Hegar's dilators, part of the mole was expelled, and the rest was removed under chloroform. The uterine wall was not markedly thinned, as

might have been expected from the absence of the uterine bruit. The patient made a rapid recovery, and left the hospital in twelve days.

VII. *Dr J. W. Ballantyne* showed a specimen of FŒTAL PERITONITIS which had been sent to him for examination by Dr Shaw of Cockburnspath. The case was that of a x-parous woman, aged 38 years, with a family history of insanity. Nine children are living and seemingly strong. About a month before her confinement, she nursed several of her family through rather severe attacks of measles, and about the same time she got a fright with a neighbour who was rapidly delivered of a child in her presence. Labour pains came on on June 16, and Dr Shaw ruptured the membranes, when a large quantity of liquor amnii came away, the head (which was small) presented and was easily delivered, but there was great difficulty with the birth of the body. The complete expulsion of the child was followed by a tremendous gush of liquor amnii. The child, a female, was dead, and looked as if it had been so for a fortnight or three weeks, as the epidermis had peeled off from nearly all the surface of the body, and all the tissues were soft and lax. There was great abdominal distension. There was a well marked double hare-lip. Frozen sections had been made which showed the usual appearances of fœtal ascites. The placenta and cord were examined, and a curious circumstance in regard to the microscopic examination of the former was the apparently healthy state of the villi and their blood-vessels, notwithstanding the fact that the fœtus had been dead for some time. The fœtus was being further examined in the College of Physicians' Laboratory. There was no history of syphilis. Dr Ballantyne connected the fœtal peritonitis, and perhaps also the fœtal death with the exposure to the infection of measles to which the mother had been subjected.

VIII. MOTHER *VERSUS* CHILD: NOTES OF A CASE OF INDUCTION OF PREMATURE LABOUR IN A PATIENT WHO HAD RECTAL CARCINOMA.

By Dr S. MacVie, Chirnside.

THE following case derives interest partly from the comparative rarity of the complication, but mainly from the important questions involved in determining the method of treatment to be adopted. When two lives are in danger, the question which ought to be saved may become of the greatest difficulty, while it is necessarily of the first importance. The answer may ultimately rest on the relative mortality of different operative measures. At a time when new methods of operating and antiseptic precautions are reducing the mortality of old operations, previous statistics are rendered valueless. At the same time sufficient data exclusively

relating to the new era, may not be forthcoming from which to lay down new rules. The balance has been disturbed, and has not yet returned to a state of rest. Obviously, opinion must manifest a similar instability.

The answer may also depend upon the relative value of the maternal and fœtal life. Under normal conditions of health, it may not be difficult to decide which life ought to be saved, but in cases where the maternal life is certain to be shortened by existing incurable disease, the decision may here also be of the greatest difficulty. It does not appear to me that sufficient data are laid before the profession upon which to arrive at a decision. It is more in the hope of elucidating information upon these two points than of contributing a pathological rarity that I have presumed to bring this case before the Society.

Mrs H., a v-para, aged 35 years, had suffered from constipation, according to her own statement, almost from her last confinement, twenty months previously. All her labours were natural and easy. On the last occasion the child was born before the arrival of the doctor, and no abnormal circumstance was noted. Five months later I saw her, to all appearance in good health, and no complaint was then made of constipation. I next saw her accidentally on the 8th March, when I heard of the constipation, and also that she considered herself about six months pregnant. This latter statement, upon inquiry, I had no reason to doubt. She was positive in fixing the end of September as the commencement of gestation. Without making a physical examination, an aperient and tonic were promised on my next call. At a late hour that same night I received an urgent summons to attend her in anticipation of a miscarriage. On my arrival the patient was moving about, and soon gave evidence of pain and down-bearing strain. After being put to bed and watched for a short time, it became evident the pains were abnormal in their duration, regularity, and force, while no signs of hæmorrhage, discharge of waters, or mucus had appeared.

On making the usual examination, the posterior vaginal wall was found bulged forward, and hard and irregular on the surface. The hardness extended above the level of the posterior fornix. The posterior lip of the os uteri was elongated, soft, and somewhat œdematous. The anterior lip was normal to the touch, but abnormally short even for the period of pregnancy. The os was not at all dilated, but where the hard vaginal wall joined the cervix the uterine tissue felt indurated. The posterior vaginal mucous membrane was smooth, and appeared to be stretched over and adherent to a hard tissue lying behind. On examination per rectum, a hard irregular tumour was found about 1¼ in. above the internal anal sphincter. This tumour, at its lower extremity, occupied the rectum as a cervix uteri does the vagina, there being about an inch of the tumour free of the rectal wall all

round. Through an opening in this downward projection the finger could, with some pressure, be passed upwards for over 2 in., when the opening either widened or the tumour altogether ended; it was not easy to discover which; probably the posterior portion thinned away. The tumour was rather an annular tube than a ring, the canal running through it being hard and irregular, and the sides almost, if not in some places actually, in contact. It was adherent to the sacrum. Over all it was about the size of a hen's egg, somewhat flattened from before backwards. The fact of the tumour being adherent to the sacrum, the posterior vaginal wall adherent to its anterior surface, the condition of the posterior lip of the os uteri, and the probable adhesion of the cervix to the upper part, foreboded an unequal and difficult dilation in labour, as well as risk of tearing or abrasion of the adherent vaginal mucous membrane.

The diagnosis was rectal obstruction due to an inoperable carcinoma. The bowels were relieved by means of tepid water enemata, and the pains ceased. As some complaint was made of dysuria, the bladder was emptied, and the amount of urine drawn off showed that over-distension was not the cause. For the next few days the bowels were kept open with castor oil and tepid water enemata, while the question of further procedure was considered. The size and situation of the tumour rendered delivery of the child at full term *per vias naturales* impossible. To terminate the pregnancy by an induced labour was possible, though not without increased danger, but the fœtus, even if born alive, would probably soon die. On the other hand, the grave risk of a Cæsarian section under circumstances which lessened the chance of a successful issue, loomed ahead. I am aware that the mortality from this operation has been greatly reduced, but it must be borne in mind that cases of pelvic deformity necessitating Cæsarian section are compatible with perfect health otherwise of both mother and child; and I cannot find figures showing the mortality of the operation when performed in cases of rectal carcinoma, where the health of both mother and child are vitiated, and where the condition of the bowels renders strict antiseptic measures almost impossible. Another possible development of the case had also to be taken into account, viz., the sudden spontaneous onset of labour prematurely after the vaginal route had become so blocked as to necessitate Cæsarian section. Considering the close relation of the tumour to the cervix, and also the excessive action of the abdominal muscles during straining, this was no mere fanciful dread. It was, in fact, the most dangerous rock ahead to both mother and child. For the success of modern Cæsarian section depends largely upon the fulfilment of two conditions, viz., strict antiseptic precautions, and the commencement of the operation before labour sets in. If these conditions are absent the modern low mortality disappears, and the ancient 80 per cent. mortality

is substituted. Now I do not suppose anyone would have advocated, in this case, a Cæsarian section of the old pre-antiseptic era type in preference to an induced premature labour. But assuming that a Cæsarian section, undertaken without due preparation in the eighth month after occlusion of the vagina, had been successful, the gain would only have been one month more of intra-uterine life to the child. The question then comes to this, Would this gain of one month of intra-uterine life have turned the scale in favour of Cæsarian section? To my mind, it would not.

Perhaps the personal equation is unduly obtrusive in these solo discussions. Unquestionably the operations referred to are differently regarded by the hospital specialist and the country practitioner. The latter would dread having a Cæsarian section thrown on his hands, while the former would feel braced to his responsible task. The like difference in mental attitude would not obtain in a case of induced labour. Hence a personal predisposition in favour of inducing premature labour, and of obviating the danger of labour occurring spontaneously at a later date, may be admitted. There is still another consideration; the sufferings of the patient were becoming more severe. Pregnancy is itself a cause of constipation, both from a lowered tonicity of the bowel and mechanical pressure. This was becoming more pathologically effective. The aperient most useful was castor oil, and it was badly tolerated. The relief which might have been afforded by a colotomy was not considered expedient until after the pregnancy had ended. After the most careful consideration I decided to terminate the pregnancy by inducing premature labour, and as soon thereafter as expedient or necessary to obtain for my patient such relief as colotomy affords.

While taking the necessary steps to ensure the welfare of my patient during and after the operation, my plans were brought to a full stop by an authoritative opinion to the effect that the labour ought to be allowed to go on to full term, and delivery effected by Cæsarian section, on the ground mainly that the child was the more valuable life. Upon the facts there was almost no difference of opinion. The extra risk of an induced labour, the more grave aspect of a Cæsarian section, the possibility of premature labour occurring at any time, were mutually admitted. But as the mother's lease of life would be short, it was incumbent to save the child as being the more valuable life.

As the patient refused to remain away from her family for over two months, she came again under my care, and, deferring to an opinion I had every reason to respect and obey, I continued to treat the rectal obstruction, await developments, and exercise my mind with the question, What are the data upon which the relative value of two lives is determined? So far I have been able to discover no data sufficiently definite to

furnish an answer in any particular case. It seems to be a general rule that when mother and child are healthy, the procedure adopted is designed to save the life of the mother. It is a procedure generally approved by the husband and other relatives. (I have been informed of a case where the doctor was urged by the husband to save the child at whatever cost to the mother, in order that certain properties might remain under his control. The appeal was unsuccessful.) Yet at twenty years of age the life-expectancy of a mother is barely equal to that of a new-born child, and at every subsequent pregnancy it is less. Therefore, at every birth after twenty years of age, the life-expectancy is taken as the measure of value, the new-born child is the more valuable life. Were it always the aim of the obstetrician to save the more valuable life, every case of contracted pelvis requiring instrumental interference and threatening the life of the child would be held to justify Cæsarian section. This argument might be appropriate in an argument between Mr Shandy and Dr Slop, but utterly absurd coming from an obstetrician.

Where, however, the mother's life-expectancy is greatly shortened by existing disease, medical as well as public opinion might veer round. There must necessarily come a point as the maternal life-expectancy shortens when the child must become the more valuable life, provided that the child's life-expectancy is not lessened in an equal ratio. The averages struck by life-expectancy tables are useful for economic and other reasons when the mass of individuals embraced is large enough to include every evil that assails human life. But when a particular case is under consideration before an average life-expectancy can be predicated, average conditions of constitution and health must be postulated. If these conditions are at a minimum the life-expectancy must fall to a minimum.

And that is the actual position in this case. The life-expectancy of both mother and child is shortened by the mother's disease. To appreciate how much the fœtal life-expectancy is shortened, it must be borne in mind that there are no life-expectancy tables reaching back to intra-uterine life. But Dr Ballantyne affirms the ante-natal death-rate, even in the later months, to be higher than is generally supposed, although he does not give figures. In the present case there is, as has been stated, the risk of spontaneous premature labour after the vaginal route is impassable, a contingency which brings down the life-expectancy of both almost to the irreducible minimum.

The general practice seems to be to regard the life of the mother as the more valuable, although her life-expectancy may be ten or fifteen years less than that of the child. It is not difficult to find ethical justification for the practice. Life-expectancy tables are misleading indices of life values, unless the duration of the

expectancy covers the same series of years. If two lives have an expectancy of twenty years each, reaching from twenty to forty, they may safely be said to be of equal value. Each individual would have the same time in which to discharge the obligations of life. The lives of mother and child do not give such synchronous parallelism, and a life-expectancy of equal duration might give widely unequal life values. For example, if a child's life-expectancy covered the first ten years, and the mother's reached from twenty to thirty years, there would be no hesitation in giving to the mother's the higher value. The difficulty lies in determining the figure with which to multiply it. And the difficulty is increased when the question is to determine the life values of a case of rectal carcinoma at thirty-five years and of her 6½ months fœtus. But although the question cannot be answered exactly, there are certain facts which assist in bringing out the difference.

Ethically regarded, the value of life consists in the discharge of subjective and altruistic obligations, instinctive or volitional as the case may be, and with such opportunity and capacity as the individual possesses. To this may be added the due performance of procreative functions from which the life acquires a racial in addition to an ethical value. In other words, life value is composed of three elements, personal, social, and racial. At certain periods of life the discharge of those obligations is an impossibility, and at such periods life has either not acquired or has lost its highest value. For example, the fœtus *in utero* is a parasite performing no function whatever. Its existence involves a physiological loss to the maternal organism. Unlike an arm or a spleen it performs no duty in return for its sustenance. Its actual value could only be expressed by a minus quantity. Its potential value is equal to its extra-uterine life-expectancy. If that is, by reason of dangers ahead, reduced to a life-expectancy minimum, its potential value may never be realised.

The new-born child is still parasitic, though detached; and, though it inhales its own oxygen, is still a physiological loss to the maternal organism. The *actual* value is still a minus quantity, but it has begun to realise its potentiality by satisfying the parental instinct and contributing to the subjective element of life.

The mother, on the other hand, has realised the potentialities of life. Value after value has been added to her existence as consciousness, self-consciousness, and volition developed. The later-added procreative function has given it a racial value. In the discharge of her manifold functions, she, living less to herself than any other being, attains a higher self-sacrificial value. She is directly and indirectly contributory to the life of her children, and her own life, to be accurately estimated, must be multiplied by some fractional sum of theirs. Thus, while child-life in its partially developed stages must be represented by a varying fraction,

the maternal life must be represented by an integer expressing her subjectivity, and that integer raised to an nth power equivalent to her manifold functions. Therefore, unless the life-expectancy of the child covers the years in which its potentiality is converted into actuality, the relative values of the maternal and fœtal life will be that of actual as against potential.

Meanwhile, the suffering of my patient increased. The castor oil was often vomited and the enemata had to be employed almost daily. About a week after her return a glass and a half of castor oil had failed to act, and I was sent for late in the evening. The straining and pain were excessive. The colon was more than usually difficult to unload on account of a small scybala which lay on the upper opening in the tumour, and acted like a ball valve. At first the tepid water was retained, and it was only by enlarging the eyelet of the rectal tube, allowing the tube to remain, and detaching the syringe, that an intermittent stream was maintained. After a protracted and painful process, a semifluent motion was obtained. This experience awoke all my dread of a spontaneous premature labour occurring at a time when the vagina was blocked. I felt convinced that this was the greatest danger, and that it was my duty to guard against it, and I decided once more to terminate the pregnancy.

The case is now one of induced labour and is in no respect noteworthy, but the main points of the procedure may be briefly noted. There are two ways of inducing labour—rapidly and slowly. In view of the condition of the cervix and the posterior vaginal wall, I decided to allow dilatation to take place slowly. For the same reason and to secure equal dilatation of the cervix and equal pressure upon it, the membranes were to be kept intact. A catheter was therefore passed carefully along the inner aspect of the uterine wall. Finding at the end of two hours distinct uterine contractions, the catheter was withdrawn. The patient was kept in bed and dieted sparingly to obviate vomiting, and also to obviate the use of castor oil or enemata.

There is an additional advantage in a slow premature labour in that it allows a detachment of the placenta more akin to what occurs normally at full term. This is an opinion derived mainly from my own experience of abortions. A self-denying ordinance was also imposed in the matter of vaginal examinations. The progress was certainly slow, and from the introduction of the catheter until the birth, fully sixty hours elapsed. The pains during that time were never severe until the last five hours. On my arrival four hours before the birth, I thought it best to administer chloroform in order to abolish all muscular resistance. The chloroform narcosis was kept up three hours. During the last half-hour, as the head emerged from the os, the abdominal muscles came into play and caused a downward propulsion of the head. This was lessened by pressing against the head with the fingers

and at the same time forcing it against the pubic bone to save the posterior vaginal wall. The tumour remained immovable, so that the dread of a tear was soon seen to be groundless, and the only danger was from pressure. Once the head had passed the tumour, there was no difficulty, and the child was born alive. The vagina was at once douched in order to detect any traces of bleeding, but the fluid returned uncoloured. The placenta was partly expressed and partly pulled away without trouble in about twenty minutes at the first attempt, and the hæmorrhage was slight. There were no traces of abrasion, and the temperature never rose above normal. The patient was out of bed in the second week, and the child was thriving.

Subsequent history sometimes plays sad havoc among successful cases. Five weeks after the birth of the child, I arranged to give my patient the benefit of a colotomy. The child was, therefore, put under the care of an aunt who lived three miles off. At the beginning of the seventh week I was called in and found it suffering from enteritis, to which it succumbed near the end of the week. I have no doubt that improper diet was the immediate cause of the enteritis, but it would be idle to deny that the prematurity of birth was indirectly contributory. At the end of the sixth week, and before the patient was removed to hospital, I discovered signs of a recto-vaginal fistula. I cannot see that stretching the parts during labour was the cause of this. It has happened in other cases, and there was no evidence of sloughing or abrasion. Besides sloughs don't heal first and then break down. It is quite as likely that it occurred from extension of the disease, and would have occurred in any case. It seems to me rather to justify the procedure, because the existence of a recto-vaginal fistula would have increased the dangers of a Cæsarean section. The fistula was situated high up in the posterior fornix, and soon became large enough to allow the finger to pass through. Flatus and fæces pass more freely per vaginam than per rectum, and the necessity for a colotomy no longer exists. The patient still requires an aperient and a morphia suppository, but takes food fairly well and attends to her household duties.

The advantages to the patient are:—

(1) The relief from the mental depression caused by the dread of an impending serious operation.

(2) The nervous energy thus liberated and distributed among the various functions makes life more cheerful, aids digestion, and gives greater tonicity to the bowels.

(3) The patient now receives that amount of nutrition which went to nourish the child, and her strength is more easily maintained.

Dr Church referred to the intellectual treat which Dr MacVie's paper afforded to the Society as well as to its deep professional importance. He thought, however, that the term parasite was not quite applicable to the fœtus *in utero*, as that word rather

suggested atrophy and non-development, both for mother and child. The child in utero grew in the fullest sense, and for the mother there were the conditions for her moral development.

Dr J. W. Ballantyne was of opinion that the relative value of fœtal and maternal life could never be fixed definitely; it must be regarded as an elastic relation which varied with circumstances, and these circumstances were numerous. It was interesting, however, to find some of the French School of Obstetricians attempting to fix the value of a maternal life as equal to at least the lives of three full-time fœtuses; this was in connection with the question of symphysiotomy *versus* Cæsarean section, where there was marked contraction of the maternal pelvis; and doubtless, in cases such as that of Dr MacVie, the proportion would have to be altered, for pelvic deformity would not of itself kill a woman, while carcinoma of the rectum certainly would. With regard to the intra-uterine death rate for fœtuses, no doubt it was high; how high could not be said for this country, where there was neither registration of still-births nor a means of calculating the number of abortions. With regard to foreign countries, an approximation could be reached with the help of the registration of still-births, but that, of course, left out of account the death rate in the early months of ante-natal life. The statistics of Whitehead showed that the abortion rate was sufficiently high to be alarming.

Drs D. Berry Hart, Jas. Ritchie, Haultain, Fordyce, and *Brewis,* also spoke.

IX. NOTE ON A CASE OF FIBROUS MOLE.

By D. Berry Hart, M.D.

Pathological questions in relation to what are termed 'moles,' are of the greatest interest and importance; yet it must be confessed that attention has been paid to them by obstetricians only of recent years, and our knowledge is as yet of the scantiest description. The reason for this has probably been that the interest in such cases has been divided, the obstetrician being specially concerned with the clinical features, and only languidly hitherto in the pathological conditions; while the pure pathologist, of course, not grasping the clinical features, and not being usually an expert in normal placental anatomy, could give only a partial explanation of the conditions found.

The only way to settle such points is for the teaching obstetrician and gynæcologist to make up his mind that he must study the pathology himself and not shift it on to the shoulders of others who are already over-weighted.

By a 'mole' we understand a 'mola' or 'mass' expelled from the uterus, and always the result of an abortion occurring usually in the early months of pregnancy. They possess the common features of marked alteration of structure, asepsis, absence of a distinct fœtus as a rule, and tendency to be retained in the uterus without

marked symptoms, not for an indefinite time, but often for several months. The ordinary hydatid mole does not possess all these characteristics, but the fleshy and fibrous moles have markedly.

The recognised varieties of mole are: *firstly*, the common hydatid mole; *secondly*, the rarer fleshy mole; and *thirdly*, the still more rare fibrous mole, of which I wish to bring up to-night for your consideration a unique example. The patient from whom I obtained the specimen, was sent me by Dr Griffith of Falkirk, with the history that nine months before she had suffered from a threatened abortion at the third month. This seemed to have passed off, but while amenorrhœa varied with an occasional flooding had occurred during the nine months subsequent, she was evidently not normally pregnant. The presumption after her threatened miscarriage, was that she was going on normally to full time; yet here she was, three months after her expected confinement, and no appearance of a baby. On examination I found the uterus the size of a three months' pregnancy, and came to the conclusion that the clinical features pointed to fleshy mole. Shortly after her return home she expelled the mass I now show.

Naked-eye Appearance of Mole.—The expelled mass is pear-shaped, and measures 4½ in. by 2½ in. (11¼ cm. by 6¼ cm.). It is rough externally, and on vertical mesial section is seen to be made up almost entirely of a white glistening mass, coarsely granular, with a small amniotic cavity at the lower end, but no fœtus. On microscopical examination, the glistening mass already described is found to be made up of hypertrophied villi, which present the following peculiarities. The core of the villus, instead of being composed of a tissue intermediate between myxomatous tissue and ordinary connective tissue, is made up of wavy fibrous tissue with very few corpuscular elements and hardly any vessels. Where the villi do not touch one another the epithelium is fairly well preserved, but at other places the villi, intervillous spaces, and decidual cells are blended. Here the villi lose their epithelium, the decidual cells are well preserved, and there is also present a homogeneous brownish substance whose nature is difficult to ascertain. It is probably fibrin. At present I am not quite clear as to the nature of the change, and I therefore merely record the case and show the specimens.

Dr J. W. Ballantyne thought that Dr Hart was to be congratulated upon the beginning he had made with the investigation of these obscure cases of mole. The whole subject had been thrown into great confusion from the days of Pliny down to our own, and there was scarcely anything which had ever been expelled from the genital canal to which the name of 'mole' had not been applied. The old medical works were full of records of moles, and many of these were evidently uterine tumours as well as the altered products of conception to which the term, if retained at all, ought to be confined. He hoped Dr Hart would attempt the reformation of the nomenclature of the subject.

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PRINTED BY OLIVER AND BOYD, EDINBURGH.

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